

ABC News

<http://abcnews.go.com/US/million-gallons-contaminated-water-turns-river-orange-colorado/story?id=32989366>

Three Million Gallons of Contaminated Water Turns River Orange in Colorado

Kaylee Heck

August 10, 10:22 AM

The Animas River in Colorado has turned orange as a toxic spill continues to flow downstream and through to other states.

A team of workers with the Environmental Protection Agency accidentally released 3 million gallons of waste water from the Gold King Mine in Silverton, Colorado, on Aug. 5, the agency said. It was initially estimated to be a third of that size at one million gallons, the EPA said.

The contaminated water contains heavy metals, including lead and arsenic, turning the river water into a murky orange and yellow color, ABC affiliate KMGH reported.

"We are aware that there are a number of old mines that have water dams like, similar to this, and we're going to go back through them," Colorado Gov. John Hickenlooper told KMGH. "People think about Colorado for our skies and our landscapes and our rushing rivers. They don't want those rivers to be orange."

There is no timetable yet for cleaning up the spill, Hickenlooper said, also adding that it's also too early to determine who should be held accountable.

The water will continue to flow through the San Juan National Forest, where the San Juan River will carry the contaminated water through Utah and eventually into Lake Powell, experts said.

It's expected to reach Lake Powell by Wednesday, experts said.

Associated Press (via US News and World Report)

<http://www.usnews.com/news/us/articles/2015/08/10/epa-colorado-mine-waste-spill-larger-than-first-reported>

EPA: Colorado mine waste spill much larger than originally estimated

Ivan Moreno

August 10, 4:05am

DENVER (AP) — The Environmental Protection Agency says the mine waste spill into Colorado waters is much larger than originally estimated.

But an EPA official said Sunday that she doesn't believe wildlife will suffer significant health impacts from the wastewater from an abandoned mine in southwestern Colorado.

The agency said the amount of heavy-metal laced water that leaked from the Gold King Mine into the Animas River, turning the water a mucky orange and then yellow, is three times larger than its initial estimate.

The EPA now says 3 million gallons of wastewater spilled Wednesday and Thursday, instead of 1 million. The revision came after the EPA used a stream gauge from the U.S. Geological Survey.

The agency has so far been unable to determine whether humans or aquatic life face health risks. However, EPA toxicologist Deborah McKean said the sludge moved so quickly after the spill that it would not have "caused significant health effects" to animals that consumed the water.

The discolored water from the spill stretched more than 100 miles from where it originated near Colorado's historic mining town of Silverton into the New Mexico municipalities of Farmington, Aztec and Kirtland.

The leading edge of the plume was headed toward Utah and Montezuma Creek near the town of Bluff, a tourist destination. The town, which is populated by a few hundred people, is surrounded by scenic sandstone bluffs.

Local officials were preparing to shut down two wells that serve Montezuma Creek, said Rex Kontz, deputy general manager for the Navajo Tribal Utility Authority.

To keep water flowing to homes, the residential tank in Halchita has been filled with clean water hauled 40 miles from Arizona.

Back in Colorado where the spill started, the EPA planned to meet with residents of Durango, downstream from the mine. The EPA water tests near Durango are still being analyzed.

The EPA has not said how long cleanup efforts will take. An EPA-supervised crew trying to enter the mine to pump out and treat the water caused the spill

Associated Press (via US News)

<http://www.usnews.com/news/us/articles/2015/08/09/epa-no-health-risks-to-wildlife-after-colorado-mine-spill>

EPA: No health risks to wildlife after Colorado mine spill, but impact to humans still unknown

Ivan Moreno

August 9, 7:26 pm

DENVER (AP) — An Environmental Protection Agency official said Sunday she doesn't believe wildlife will suffer significant health impacts from the large volume of wastewater that spilled from an abandoned mine in southwestern Colorado.

The EPA also said the amount of heavy-metal laced wastewater that spilled from Colorado's Gold King Mine into the Animas River, turning the water a mucky orange and then yellow, is three times larger than its initial estimate.

The agency now says 3 million gallons spilled into the river Wednesday and Thursday, instead of 1 million. The revision came after the EPA used a stream gauge from the U.S. Geological Survey.

Four days after the EPA-caused spill, the agency has been unable to determine whether humans or aquatic life face health risks. However, EPA toxicologist Deborah McKean said the sludge moved so quickly after the spill that it would not have "caused significant health effects" to animals that consumed the water.

The discolored water from the spill stretched more than 100 miles from where it originated near Colorado's historic mining town of Silverton into the New Mexico municipalities of Farmington, Aztec and

Kirtland.

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Associated Press (via Global News)

<http://globalnews.ca/news/2156357/colorado-mine-spill-that-turned-river-yellow-is-3-times-larger-than-first-estimated/>

Colorado mine spill that turned river yellow is 3 times larger than first estimated

Ivan Moreno

August 10, 1:39 PM

DENVER – The yellow plume of contaminated wastewater that spilled from an abandoned Colorado mine and flowed downstream toward two other states is three times larger than originally estimated, federal officials say.

Global News

The U.S. Environmental Protection Agency used better measurements to find that 3 million gallons of wastewater laced with heavy metals, including lead and arsenic, spilled from the Gold King Mine and turned the Animas River a mustard yellow last week. The agency initially estimated 1 million gallons escaped.

The EPA has so far been unable to determine whether humans or aquatic life face health risks from the pollution, but an agency official said Sunday that she doesn't believe wildlife is in great danger.

The sludge moved so quickly that it would not have "caused significant health effects" to animals that consumed the water, EPA toxicologist Deborah McKean said.

No drinking-water contamination has been reported because water utilities shut down their intake valves ahead of the plume to keep it out of their systems. Farmers also closed the gates on their irrigation ditches to protect their crops.

The discolored water stretched more than 100 miles from where it originated near Colorado's historic mining town of Silverton into the New Mexico municipalities of Farmington, Aztec and Kirtland.

There, the EPA and New Mexico are offering free testing of water from domestic wells this week.

The leading edge of the plume was headed toward Utah and Montezuma Creek near the town of Bluff, a tourist destination. The town, which is populated by a few hundred people, is surrounded by scenic sandstone bluffs.

Local officials prepared to shut down two wells that serve Montezuma Creek, said Rex Kontz, deputy general manager for the Navajo Tribal Utility Authority.

To keep water flowing to homes, the residential tank in Halchita has been filled with clean water hauled 40 miles from Arizona.

In Colorado, the EPA planned to meet with residents of Durango, downstream from the mine as water tests from near the city were still being analyzed.

Federal officials have not said how long cleanup efforts will take after an EPA-supervised crew trying to enter the mine to pump out and treat the water caused the spill.

Associated Press (via Star Tribune)

<http://www.startribune.com/epa-colorado-mine-waste-spill-larger-than-first-reported/321229111/>

Navajo Nation cites emergency after Colorado mine spill dumps massive contamination into river Ivan Moreno

August 10, 2:30 PM

DENVER — Tribal officials with the Navajo Nation declared an emergency as a massive plume of contaminated wastewater from an abandoned Colorado mine flowed down the San Juan River on Monday toward Lake Powell in Utah, which supplies much of the water to the Southwest.

Some drinking water systems on the Navajo Nation, which spans parts of New Mexico, Arizona and Utah, have shut down their intake systems and stopped diverting water from the river.

Drinking water is being hauled to some communities.

Navajo President Russell Begaye said the tribe is frustrated with U.S. Environmental Protection Agency and he plans to take legal action. An EPA-supervised crew has been blamed for causing the spill while attempting to clean up the mine area.

Elsewhere, farms along the Animas and San Juan river valleys in northwestern New Mexico have no water to irrigate their crops after the spill.

The yellow plume of wastewater stretches 100 miles and was three times larger than initially estimated, federal officials say. The EPA initially estimated 1 million gallons escaped.

The water is laced with heavy metals, including lead and arsenic, and spilled from the Gold King Mine in the historic town of Silverton, turning the Animas River in Colorado a mustard yellow last week.

The spill reached the New Mexico municipalities of Aztec, Farmington and Kirtland over the weekend.

The EPA has so far been unable to determine whether humans or aquatic life face health risks from the pollution.

The Navajo Nation in its declaration stated the toxic spill will have long-lasting and unknown impacts on the tribe's water system and wells.

No drinking-water contamination has been reported because water utilities shut down their intake valves ahead of the plume to keep it out of their systems. Farmers also closed the gates on their irrigation ditches to protect their crops.

Colorado authorities said Monday there were no reports yet of harm to wildlife in that state.

The state's Parks and Wildlife agency said it had inserted cages with more than 100 fingerling trout into the river in southwest Colorado near Durango.

The fish are sensitive to changes in water quality. As of Monday, only one fish had died, but the agency said it didn't know if that was because of the metals in the water.

The sludge moved so quickly that it would not have caused significant health effects to animals that consumed the water, EPA toxicologist Deborah McKean said.

The leading edge of the plume was headed toward Utah and Montezuma Creek near the town of Bluff, a tourist destination. The town, which is populated by a few hundred people, is surrounded by scenic sandstone bluffs.

Local officials prepared to shut down two wells near Montezuma Creek, said Rex Kontz, deputy general manager for the Navajo Tribal Utility Authority.

To keep water flowing to homes, the residential tank in Halchita has been filled with clean water that was hauled 40 miles from Arizona.

In Colorado, the EPA planned to meet with residents of Durango, downstream from the mine as water tests from near the city were being analyzed.

Federal officials have not said how long cleanup efforts will take.

The mine has been inactive since 1923.

A family farm that serves as many as 3,000 customers in the Four Corners region has been forced to stop irrigating dozens of acres.

D'rese Sutherland of Sutherland Farmers in Cedar Hill, New Mexico, said she received advanced warning from farmer friends in Colorado about the approaching plume.

Trucking companies that work with the region's oil and gas industry have offered to haul water to the farm, but Sutherland said it would require a significant amount to keep the chile, pumpkins and other vegetables watered.

There was no indication of when the water will be safe to use again, she said.

Members of New Mexico's congressional delegation sent a letter to EPA Administrator Gina McCarthy, expressing concern over the failure of the agency to notify New Mexico sooner.

They also asked that the agency develop a plan for dealing with the lack of water for communities in San

Juan County and the Navajo Nation.

"We have yet to be presented with a comprehensive plan from the agency to provide water to those whose wells have been affected, farmers whose crops are not being irrigated, ranchers whose livestock are without water, and people for drinking, cooking, and showering," the letter stated.

Associated Press (via Tuscon News Now)

<http://www.tucsonnewsnow.com/story/29750718/colorado-mine-spill-3-times-larger-than-believed-feds-say>

Colorado mine spill 3 times larger than believed, feds say

AP

August 10, 1:06 PM

DENVER (AP) - Federal officials say the yellow plume of contaminated wastewater that spilled from an abandoned Colorado mine states is three times larger than originally estimated.

The U.S. Environmental Protection Agency says 3 million gallons of wastewater laced with lead and arsenic, spilled from the Gold King Mine and turned the Animas River a mustard yellow last week. The agency initially estimated 1 million gallons escaped.

The river flows through New Mexico and Utah and ultimately into Lake Mead.

The EPA has so far been unable to determine whether humans or aquatic life face health risks from the pollution, but an agency official said Sunday that she doesn't believe wildlife is in great danger.

No drinking-water contamination has been reported because water utilities shut down their intake valves ahead of the plume to keep it out of their systems.

Associated Press (via abc News)

<http://abcnews.go.com/US/wireStory/epa-colorado-mine-waste-spill-larger-reported-32985628>

Colorado Mine Spill 3 Times Larger Than Believed, Feds Say

Ivan Moreno

August 10, 11:45 AM

The U.S. Environmental Protection Agency used better measurements to find that 3 million gallons of wastewater laced with heavy metals, including lead and arsenic, spilled from the Gold King Mine and turned the Animas River a mustard yellow last week. The agency initially estimated 1 million gallons escaped.

The EPA has so far been unable to determine whether humans or aquatic life face health risks from the pollution, but an agency official said Sunday that she doesn't believe wildlife is in great danger.

The sludge moved so quickly that it would not have "caused significant health effects" to animals that consumed the water, EPA toxicologist Deborah McKean said.

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In Colorado, the EPA planned to meet with residents of Durango, downstream from the mine as water tests from near the city were still being analyzed.

Federal officials have not said how long cleanup efforts will take after an EPA-supervised crew trying to enter the mine to pump out and treat the water caused the spill.

Bloomberg

<http://www.bloomberg.com/news/articles/2015-08-10/epa-seen-liable-for-loses-after-colorado-mine-spill-fouls-river>

EPA May Be Liable for Losses in Colorado Mine Spill

Mark Drajem

August 10, 3:58PM

The Environmental Protection Agency and its contractors may have to pay millions of dollars for damages after mistakenly releasing toxic sludge that tainted a Colorado river.

Mustard-colored water continued to leak Monday from the long-abandoned Gold King Mine in Silverton, Colorado, and into the Animas River, after the EPA said it "unexpectedly triggered" the Aug. 5 breach. The agency set up a claims process for losses from the 3 million gallons that leaked, three times more than initially estimated.

While the Clean Water Act and environmental rules often exempt federal agencies and clean-up personnel in spills, such protections are voided for negligence by employees or contractors, or if the clean-up crew releases new pollution.

"It's certainly a black eye for the EPA," said Thaddeus Lightfoot, a partner at Dorsey & Whitney who often represents industry clients facing action by the agency. "If EPA causes this kind of release, they need to be held responsible, just as a private party would be."

Acidic water burst from the mine on Aug. 5 as EPA officials dug open the mine portal to investigate the

build up of contamination at Gold King. Data released by the agency showed the water contained elevated levels of lead, arsenic and magnesium, all harmful to humans and the environment. The river flows south and into the San Juan River in New Mexico.

Navajo Emergency

Some water systems on the Navajo Nation, which is south of Colorado, have shut intake systems on the San Juan River, according to the Associated Press. Navajo President Russell Begaye said the tribe is frustrated with the EPA, and he threatened to take legal action, AP reported.

The EPA, through its Superfund program, has investigated the toxic chemicals in water and soil around abandoned mines near Silverton, in the mountains of southwest Colorado. Water quality has worsened in the Animas River since 2008, with higher levels of heavy metals that make it toxic to most trout. Costs for such river contamination can exceed \$100 million in U.S. fines and remediation.

After a Duke Energy Corp. coal-disposal pond sprung a leak and contaminated North Carolina's Dan River last year, the company pleaded guilty and agreed to spend \$34 million on river and wetlands projects nearby and pay a \$68 million criminal fine.

Mine Caps

In Colorado, the EPA was preparing to install a drainage pipe from the Gold King Mine, as part of a project to cap a nearby mine. Of about 200 mines, local environmental groups identified about 30 that need work, said Peter Butler, a co-coordinator of the Animas River Stakeholders Group.

"They made some mistakes," Butler said of the EPA. "It would have behooved them to talk to more people before they got in there."

EPA has apologized and opened the claims process on Sunday, saying businesses or residents facing personal injury or property damage could file a claim for "damage caused by U.S. government actions." "Although EPA's regulations state that the EPA has six months to resolve a claim, the agency will make every effort to respond to Gold King Mine spill claims as soon as possible," the agency said on its website.

Following the spill, the local sheriff's office on Aug. 6 closed the river to swimming, kayaking and rafting. EPA advised downriver farmers and cities to close water intakes, and some officials said a lack of irrigation water could cause hardships.

Bulletin Leader

<http://www.bulletinleader.com/sludge-from-colorado-mine-spill-heads-down-river-to-nm/21908/>

Sludge from Colorado mine spill heads down river to NM

Sam Kerry

August 10

Lead poisoning, on the other hand, may lead to muscle and vision problems for adults, kidney disease, harm fetus and child development and possibly death in children. As the murky water traveled 50 miles from Silverton, it tumbled over rocks that kept it stirred. The Animas River cuts through the park. The bright orange color comes from sediment.

"It's here for a while, no doubt about it", said Butch Knowlton, director of La Plata County's Office of Emergency Management. The EPA says tests also were being done there, but no more information has been released. Toxic wastewater has continued to flow from the mine ever since.

Gov. Susana Martinez said the New Mexico Environment Department is working around the clock to monitor the situation in the Animas River.

Federal officials said Saturday that the rate was down from about 740 gallons per minute on Friday. Companies that run river tours canceled hundreds of reservations during what should be their busiest month.

Meanwhile, New Mexico officials blasted the EPA for not warning them sooner about the contamination headed their way. However, there is no estimate as to when exactly the wastewater will completely disappear. Portable water stations were also set up for the areas and officials ask that people and their pets "avoid contact with the water".

"When I first saw it, I was speechless, [the river] didn't look real", said Durango, Colorado, resident Ian Lucier. But three days after the spill, the agency said it still doesn't know what the possible environmental and health impacts are.

Silverton and San Juan County officials have resisted efforts to launch a full-scale federal "Superfund" cleanup to address this problem due to fears of a stigma that could hurt the tourism they count on for business.

"There will be accountability and those are conversations we can have", Flynn said.

The river had begun to clear up in Silverton, McClain-Vanderpool said. "The EPA causes all of this and then they say, 'Oh well' and nothing happens".

It's prompted communities along the route to shut off valves leading to water supplies since the Animas is the main feed into the San Juan River.

Many were demanding answers including the president of The Navajo Nation. Results were expected on Friday night (August 7). Water that had been stored behind the collapsed material leaked into the Center Creek accessible to the Animas River.

"Until we know what we're up against and what the effects will be, we're saying, 'Be cautious,'" Baker said.

Water moves more quickly through boulders and gravel than it does dirt, clay, sand and fine silts, Knowlton said.

"I have some areas that need water right now". "This is going to be a long-term impact". Those who caused the contamination failed to warn New Mexico authorities, who are understandably miffed. If you live in the Animas River or San Juan River flood plain and your wellhead is at roughly the same level as the river, the Environment Department advises you to refrain from using the water for cooking and drinking or any human or animal ingestion until further notice.

CBS

<http://www.cbsnews.com/news/colorado-mine-waste-spill-environmental-protection-agency/>

Residents on edge as toxic Colo. spill larger than first reported

CBS/AP

August 10, 10:52 AM

DENVER -- The Environmental Protection Agency says the mine waste spill into Colorado waters is much larger than originally estimated.

But an EPA official said Sunday that she doesn't believe wildlife will suffer significant health impacts from the wastewater from an abandoned mine in southwestern Colorado.

The agency said the amount of heavy-metal laced water that leaked from the Gold King Mine into the Animas River, turning the water a mucky orange and then yellow, is three times larger than its initial estimate.

The EPA now says 3 million gallons of wastewater spilled Wednesday and Thursday, instead of 1 million. The revision came after the EPA used a stream gauge from the U.S. Geological Survey.

CBS Denver reports that Governor Hickenlooper is preparing a state of emergency for the areas in southwest Colorado along the Animas River. Both the town of Durango and La Plata County have already issued their own emergency orders.

The agency has so far been unable to determine whether humans or aquatic life face health risks. However, EPA toxicologist Deborah McKean said the sludge moved so quickly after the spill that it would not have "caused significant health effects" to animals that consumed the water.

The discolored water from the spill stretched more than 100 miles from where it originated near Colorado's historic mining town of Silverton into the New Mexico municipalities of Farmington, Aztec and Kirtland.

"I'm here on my property and I cannot shower, I cannot cook, I cannot do anything with the water from my water well," Farmington resident Rosemary Hart told CBS News correspondent Mireya Villarreal.

The leading edge of the plume was headed toward Utah and Montezuma Creek near the town of Bluff, a tourist destination. The town, which is populated by a few hundred people, is surrounded by scenic sandstone bluffs.

Local officials were preparing to shut down two wells that serve Montezuma Creek, said Rex Kontz, deputy general manager for the Navajo Tribal Utility Authority.

To keep water flowing to homes, the residential tank in Halchita has been filled with clean water hauled 40 miles from Arizona.

Back in Colorado where the spill started, the EPA planned to meet with residents of Durango, downstream from the mine. The EPA water tests near Durango are still being analyzed.

The EPA has not said how long cleanup efforts will take. An EPA-supervised crew trying to enter the mine to pump out and treat the water caused the spill.

Without solid answers on whether the water is safe, many residents and top officials are still concerned, CBS Denver reports.

"My water well is 50 feet from the Animas River, and we're awaiting the results like many of you," said Sheriff Sean Smith at Sunday night's public meeting.

The images of the tainted river have Durango residents like Joe Genualdi worried.

"It's already hard enough to catch fish in the Animas, and this stuff, it's definitely not good for them," Genualdi told CBS News. "It's going to kill a lot of fish off."

CNBC

<http://www.cnn.com/2015/08/10/colorado-mine-spill-toxic-wastewater-leak-far-exceeds-first-estimates.html>

Colorado mine spill: Toxic wastewater leak far exceeds first estimates

Erin McClam

August 10, 3:45

A spill that sent toxic water seeping from an abandoned Colorado gold mine and turned a river orange is three times as large as first thought, the Environmental Protection Agency said.

The EPA said Sunday that 3 million gallons of wastewater had spilled from the mine, and the sludge was still flowing. The EPA said that health risks to humans and aquatic life were not yet clear.

On Wednesday, an EPA-supervised cleanup crew accidentally breached a debris dam that had formed inside the Gold King Mine, shuttered since 1923, sending a yellow-orange sludge leaking into the Animas River.

Water collected downstream showed higher than normal levels of arsenic, lead and other metals. In Durango, Colorado, the mayor assured people the water was safe to drink because the city shut off its intake valve from the Animas.

Still, "The river for us is an integral part of our community," state Sen. Ellen Roberts, who represents Durango, told MSNBC on Monday. "It's where people get married. People do their own private ceremonies along there. It's our daily life."

The discolored water reached New Mexico and by late Sunday was headed for Utah. Authorities there were planning to shut two wells that serve the town of Montezuma Creek. A tank of residential water in Halchita, Utah, was filled with water shipped from Arizona.

CNN

<http://www.cnn.com/2015/08/09/us/colorado-epa-mine-river-spill/>

EPA spill: 'The magnitude of it, you can't even describe it'

Dana Ford

August 10, 6:30 AM

(CNN)The city of Durango and La Plata County, Colorado, have declared a state of emergency after a federal cleanup crew accidentally released mine waste into the water.

An estimated 1 million gallons of waste water spilled out of an abandoned mine area in the southern part of the state last week, turning the Animas River orange and prompting the Environmental Protection Agency to tell locals to avoid it.

"This action has been taken due to the serious nature of the incident and to convey the grave concerns that local elected officials have to ensure that all appropriate levels of state and federal resources are brought to bear to assist our community not only in actively managing this tragic incident but also to recover from it," said La Plata County Manager Joe Kerby.

According to the EPA, the spill occurred when one of its teams was using heavy equipment to enter the Gold King Mine, a suspended mine near Durango. Instead of entering the mine and beginning the process of pumping and treating the contaminated water inside as planned, the team accidentally caused it to flow into the nearby Animas River. Before the spill, water carrying "metals pollution" was flowing into a holding area outside the mine.

Colorado Parks and Wildlife officials have been watching for any effects on wildlife since the incident began on Wednesday. They are optimistic that the effects of the spill on terrestrial wildlife will be minimal, the EPA said. Fish are more sensitive to changes in water.

Officials said they believe the spill carried heavy metals, mainly iron, zinc and copper, from the mine into a creek that feeds into the Animas River. From there, the orange water plugged steadily along through the small stretch of winding river in southern Colorado and across the state border to New Mexico where the Animas meets the San Juan River.

New Mexico Gov. Susana Martinez was in Farmington over the weekend to tour the damage.

"The magnitude of it, you can't even describe it," she said, CNN affiliate KRQE reported. "It's like when I flew over the fires, your mind sees something it's not ready or adjusted to see."

The affiliate spoke to Rosemary Hart, who lives on the Animas River. Her family reportedly depends on a well to get water, and the spill has made the water unusable.

"We came out here together, and we looked at the river and we cried," Hart told KRQE.

The EPA and the New Mexico Environment Department said they will test private domestic wells near the Animas to identify metals of concern from the spill.

Tests on public drinking water systems are conducted separately by the state environment department, the agencies said.

CNN

<http://www.cnn.com/2015/08/10/us/colorado-epa-mine-river-spill/>

Pollution flowing faster than facts in EPA spill

Mariano Castillo

August 10, 3:34 PM

(CNN) The mustard hue of the Animas River in Colorado -- the most visible effect of a mistake by the Environmental Protection Agency that dumped millions of gallons of pollutants into the water -- is striking.

Just a glance at a photo of the orange-yellowish slush is enough to know that something seems wrong. Scientists will have to say just how wrong, and possibly dangerous, the contamination is, though five days after the spill answers are few.

Just how polluted is the river? Is drinking water in peril? Are businesses dependent on the river out of luck?

One question that has been answered is the size of the spill: more than triple than originally estimated. The U.S. Geological Survey reported the size of the spill to be more than 3 million gallons, compared with the initial EPA estimate of 1 million gallons.

The EPA, which caused the accidental release of the contaminants Wednesday, said it continues to monitor the river.

"Collection, transportation and lab analysis of metals in water is complex and time-consuming," the agency said in a statement.

Cities in New Mexico are also at risk as the pollution flows from the Animas River into the San Juan River.

A flyover with a specialized aircraft showed that the conditions on the Animas and San Juan rivers between Durango, Colorado, and Farmington, New Mexico, have improved, the EPA said.

According to the EPA, the spill occurred when one of its teams was using heavy equipment to enter the Gold King Mine, a suspended mine near Durango. Instead of entering the mine and beginning the process of pumping and treating the contaminated water inside as planned, the team accidentally caused it to flow into the nearby Animas River.

Officials said they believe the spill carried heavy metals -- mainly iron, zinc and copper -- from the mine into a creek that feeds into the Animas.

Wednesday's spill caused a spike in concentrations of total and dissolved metals in the water, the EPA said.

"These concentrations began to return toward pre-event conditions" by Thursday, the agency said, adding that the results of additional tests carried out over the weekend will show whether that trend continues.

The EPA has collected water samples from nine locations along the San Juan River where there are water intake plants.

"This is a really devastating spill," said Kim Stevens, director of the advocacy group Environment Colorado. "We've been hearing from rafting companies and other businesses that rely on the river that if they can't get clients out on the river in the next couple of days, they may have to shut down their doors."

The rivers' ecosystems are also at risk, she said.

"The fish population is especially very sensitive to water contamination, and we really won't be able to see what the impacts are until all of the pollution has run its course. Time will tell what the true impacts are," she said.

The city of Durango and La Plata County, Colorado, have declared a state of emergency because of the spill.

The EPA and the New Mexico Environment Department said they will test private domestic wells near the Animas to identify metals of concern from the spill.

Tests on public drinking water systems are conducted separately by the state environment department, the agencies said.

Daily Mail

<http://www.dailymail.co.uk/news/article-3192557/Officials-admit-waste-spill-Colorado-actually-THREE-TIMES-larger-thought-contaminated-water-turning-rivers-orange-laced-arsenic.html>

Officials admit that waste spill from Colorado mine was actually THREE TIMES larger than they thought... and that the contaminated water turning rivers orange was laced with arsenic

Christopher Brennan

August 10, 2:18 PM

Federal officials have admitted that the flood of mine waste that turned a Colorado river putrid orange was actually three times than they first thought.

The US Environmental Protection Agency said a team was working with heavy equipment last week to secure an entrance to the Gold King Mine, near Durango, when three million gallons of waste was unleashed into nearby Cement Creek

The creek runs from Silverton, Colorado, into the Animas River before flowing into the San Juan River at Farmington, New Mexico, where discolored water has been seen 100 miles from the spill.

Officials said that the spillage did not pose a threat to drinking water after municipalities shut down intake valves from the contaminated rivers. They have also now insisted that the accident would not have 'caused significant health effects' to animals because of how quickly it moved.

However, preliminary studies of the water near Durango, Colorado, found that arsenic levels peaked at 300 times more than normal and lead levels at one point reached 3,500 times more than usual.

Scroll down for video

Officials have said that drinking water was still safe, though those using wells in areas of northern New Mexico have been told to get their supply tested. Above, Dan Bender from the La Plata County Sheriff's Office takes a sample of the water in Animas River on Thursday

The Environmental Protection Agency's Deborah McKean said that the fact that arsenic was at one point 300 times its normal level was scary, but said that the contaminants were not in one place for very long.

'Yes, those numbers are high and they seem scary,' said Deborah McKean, the EPA's chief of the Region 8 Toxicology and Human Health and Risk Assessment.

The metals are dangerous to humans in high concentrations, but McKean insisted that the contaminants were not in one place for long in the river and that individual exposure to them would be low, according to the Farmington Daily Times.

Officials had previously said that drinking water would not be affected, but those in northern New Mexico with wells have been told to have their water tested before using it to drink, give to livestock, cook or bathe.

The EPA said its cleanup team had been working at the Gold King Mine on Wednesday. 'The project was

intended to pump and treat the water and reduce metals pollution flowing out of the mine,' said agency spokesman Rich Mylott.

A coordinator for the Gold King Mine project, Hays Griswold, told The Durango Herald that he'd thought only five feet of water was being held behind the collapsed entrance to the mine.

He was going to install a pipe to remove the trapped contaminated water, which had been leaking slowly into the creek. However, when Griswold's crew made a hole in the mine tunnel, he noticed water seeping through the dirt.

Some had suspected that the spill would quickly kill local wildlife, though only one fish in a study had died as of Monday.

Griswold, who was filling in this week for the project's long-term coordinator, then realized there was 12 feet on water behind it. It eroded the dirt and burst forth. 'There was no stopping it at any time,' he said. The polluted water 'was held behind unconsolidated debris near an abandoned mine portal', said the EPA in a statement.

Durango resident Lisa Shaefer said she was near the mine Wednesday when a mine bulwark broke and sent a torrent of water downstream that raised the water level two to three feet in Cement Creek. The wall of water carried rocks and debris and made a roar as it pushed through a culvert, she said.

'What came down was the filthiest yellow mustard water you've ever seen,' she told the newspaper of the normally scenic waterway that was a backdrop for Butch Cassidy And The Sundance Kid and is popular with summer boaters.

No workers were harmed during the spill.

Officials at the time emphasized that there was no threat to drinking water from the spill. But downstream water agencies were warned to avoid Animas River until the plume passed, said David Ostrander, director of EPA's emergency response program in Denver.

Local cities mostly pull from the Florida River, though local farmers often use the Animas and San Juan for their needs.

Officials have now stated that they are unsure about what health risks exposure to the water may cause. Water tests from Durango are still being analyzed and the EPA and New Mexico are offering free well testing this week.

Residents of towns such as Aztec, New Mexico, are also able to fill up to 100-gallon tanks at local potable water stations.

La Plata County and Durango both declared states of emergency 'to convey the grave concerns' about the situation to high levels of government.

The Navajo Nation President Russell Begaye had not yet signed a declaration of emergency as of late Sunday.

Vice President Jonathan Nez attended a meeting in Durango on Sunday and said that water was especially important to his nation and livestock farmers in it.

'A lot of livestock utilize the water. What are we supposed to do? Stand guard 24 hours to keep our

livestock from drinking the water?' he said, according to the Daily-Times.

One farmer said that he would not be able to irrigate his fields for the rest of the season and would lose his crops.

EPA spokespeople weren't sure how long it would take the plume to dissipate, Ostrander said. The acidic sludge's heavy metals could irritate the skin, he added.

The EPA is still testing the plume. Previous contamination from the mine sent iron, aluminum, cadmium, zinc and copper into the water, said Peter Butler, co-coordinator of the Animas River Stakeholders Group. Contaminants originally made the water's pH drop from 7.8 to 5.8, according to tests from Colorado Division of Reclamation, Mining and Safety scientist Kirstin Brown.

A neutral pH is 7, and each whole number below that represents a tenfold increase in acidity, meaning that the Animas has become 100 times more acidic.

Marcie Bidwell, executive director of the Mountain Studies Institute, said that the river's pH had returned to safe levels by Sunday night.

The plume of contaminants made its way south toward Durango on Thursday afternoon, prompting La Plata County health officials to warn rafters and water users to avoid the river. It was expected to hit the Colorado-Utah border early Monday as it headed towards Montezuma Creek near the scenic town of Bluff.

Two wells serving Montezuma Creek will be shut down, Rex Kontz, deputy general manager for the Navajo Tribal Utility Authority, said.

In Farmington, New Mexico, officials shut down water-supply intake pumps to avoid contamination and advised citizens to stay out of the river until the discoloration has passed.

'It's really, really ugly,' Butch Knowlton, La Plata County's director of emergency preparedness, told The Durango Herald. 'Any kind of recreational activity on the river needs to be suspended.'

The mine was opened more than a hundred years ago and its permit was revoked in 2005.

'The most important thing is what's in (the water). I need to know. Back in the 1800s, things were used in mining that aren't allowed any more.' Steve Salka, Durango's utilities manager, told the Denver Post when researchers were working to find out the plume's contents.

There were already few fish in the Cement Creek watershed because of longstanding problems with water quality, the Colorado Department of Public Health and the Environment said.

However the creek and Animas River flow into San Juan, which contains endangered species such as the Colorado Pikeminnow and Razorback Sucker.

Colorado Parks and Wildlife placed cages containing fish in the Animas River to monitor what happens to them, spokesman Joe Lewandowski said.

As of Monday only one of 108 had died, according to the Guardian.

'We'll see if those fish survive,' Lewandowski said. 'We're also monitoring to make sure we don't get infiltration into the hatchery, because that could be a problem.'

Metro State University's water expert Tom Cech told 9 News, 'What a tragedy for the aquatic wildlife. 'It could be a few years where it's somewhat rehabilitated, or it could be decades. It really depends on future drought scenarios.'

Mountain Studies Institute scientist Scott Roberts said that macroinvertebrates such as snails and crustaceans had not died after being exposed, which was a good sign. However, worries remained about long-term effects.

The EPA's response to the incident quickly came under criticism from those downriver last week. New Mexico Governor Susana Martinez's office said it was angry that it first heard about the spill from the state's southern Ute tribe - rather than the agency itself.

A spokesman told KOB, 'The Governor is disturbed by the lack of information provided by the EPA to our environmental agencies in New Mexico and strongly believes that people in our communities downstream deserve to have all the information about this situation.'

The Gold King Mine is still leaking 500 gallons per minute, but the waste is going into newly dug ponds. The EPA provided information about filing a claim for 'compensating citizens who suffer personal injury or property damage caused by US government actions' in a Sunday release.

Federal officials have previously lobbied to have the Gold King Mine site added to the national Superfund list, which would give access to federal money to cleanup hazardous waste.

A proposal to add the area was abandoned in 2008 because of community opposition, though discussions about the designation have begun again.

Denver Post

http://www.denverpost.com/news/ci_28612228/la-plata-and-durango-declare-emergency-sludge-flows

Animas River mine spill: La Plata and Durango declare state of emergency

Tom McGhee

August 9, 6:19pm

Three million gallons of water containing mining waste has poured into the Animas River since Wednesday, and it is still unclear what the environmental and health impact of the spill, caused by the Environmental Protection Agency, will be.

Water collected at sampling stations along Cement Creek and the upper Animas found higher-than-normal levels of arsenic and other heavy metals, Deborah McKean, an EPA toxicologist, said in a Sunday conference call with the media.

But the levels are dropping as the plume drifts farther down the river and is diluted. "Those concentrations increase for a few hours and then decrease again by the next sampling period," she said. "Those numbers are high and they are scary because they seem so high. However, risk associated with exposure to a chemical is a matter of how much of the chemical you are exposed to."

It remains unclear if the spill poses health risks to humans and aquatic life.

On Sunday, La Plata County and Durango both declared a state of emergency as a result of the spill, which originated at a mine near Silverton.

"This action has been taken due to the serious nature of the incident and to convey the grave concerns

that local elected officials have to ensure that all appropriate levels of state and federal resources are brought to bear to assist our community not only in actively managing this tragic incident but also to recover from it," La Plata County Manager Joe Kerby said in a release.

On Sunday, the EPA posted reports on its website including sample data taken from the river at different locations that detail how much metal is in the water. Tom Dea, vice president for TZA Water Engineers in Lakewood, reviewed those reports for The Denver Post.

Dea said because the latest report on the site shows data from Aug. 6, it would be inaccurate to report on those numbers now since the data will be "continually changing" as the pollution makes its way through the water.

Wastewater from Gold King Mine started spilling after an EPA-supervised cleanup crew accidentally breached a debris dam inside the inactive mine last Wednesday. The EPA originally reported 1 million gallons spilled into the river. On Sunday, the agency revised that to 3 million gallons after the EPA used a stream gauge from the U.S. Geological Survey.

The mine continues to discharge about 500 gallons of water per minute into ponds, where it is being treated before it goes into Cement Creek, where it is carried into the river.

The city of Durango uses drinking water from the Animas. But an intake valve was turned off before contaminated water reached it, city officials said. "Your water never has been and never will be contaminated," Durango Mayor Dean Brookie said at a Sunday public forum, referring to the city's tap water. "Your water is safe to drink.

Some residents along the river who rely on wells for drinking water have told the EPA that their water is discolored. EPA teams are checking water in those locations, Mc Kean said. The agency is providing drinking water to those who need it.

Some toxins will settle on the river bottom, said Shaun McGrath, EPA regional chief. Future storms will kick up sediment, so the river will require continued monitoring.

The discolored water from the spill stretched more than 100 miles Sunday from where it originated, reaching the New Mexico municipalities of Farmington, Aztec and Kirtland.

The leading edge of the plume was headed toward Utah and Montezuma Creek near the town of Bluff, a tourist destination.

Officials were preparing to shut down two wells that serve Montezuma Creek, said Rex Kontz, deputy general manager for the Navajo Tribal Utility Authority.

At a Sunday public forum, citizens affected by the pollution peppered the EPA with questions, demanding answers to questions such as "what do I tell the employees of my river rafting business?" and "what are you doing now to address the long-term effects of this disaster?"

A representative from the Navajo Nation also took the stage to address the crowded room.

Navajo Nation President Russell Begaye has said he intends to sue the EPA for the massive release of mine waste, according to nativenewsonline.net.

The Denver Post

http://www.denverpost.com/news/ci_28614946/epa-taking-damage-claims-toxic-spill-animas-river

EPA taking damage claims for toxic spill in Animas River

Tom McGhee

August 10, 11:01 AM

The Environmental Protection Agency is taking damage claims from residents near southwest Colorado waterways where the agency was responsible for a spill that sent a plume of contaminated and discolored water into the waterways.

In a release Monday, five days after 3 million gallons of polluted water spilled from the inactive Gold King Mine, the EPA spells out a process for submitting a claim for "personal injury or property damage caused by U.S. government actions."

Wastewater containing contaminants including cadmium, arsenic, copper, lead and zinc began pouring into waterways after an EPA-supervised cleanup crew accidentally breached a debris dam inside the mine. The EPA initially reported 1 million gallons spilled into the river.

On Sunday, the agency revised that to 3 million gallons.

Wastewater and sludge poured into Cement Creek and from there into the Animas River, a tributary of the San Juan, and the plume of contamination has also run into that river.

A flyover of the river system on Monday by the EPA found that conditions from Farmington, N.M., north to Durango, appear to be improving. "While the San Juan River remains discolored, the leading edge of the contaminant plume is no longer visible," the release said.

The mine continues to discharge about 500 gallons per minute into settling ponds where it is treated before it goes into Cement Creek, and carried into the river.

Dispatch Times

<http://www.dispatchtimes.com/plume-from-colorado-mine-spill-reaches-new-mexico/40012/>

Plume from Colorado mine spill reaches New Mexico

Newsmedia

August 10, 2015

"This was caused by the EPA and the EPA should demand the same of itself as it would of a private business responsible for such a spill, particularly when it comes to making information available to the public and state and local officials", she said.

In a news release, Begaye demanded the federal government provide water for farmers and families who rely on the river and compensate the Navajo Nation for any cleanup costs.

"We're busting our tails to get that out," Environmental Protection Agency Regional Director Shaun McGrath said.

"There's still a whole generation of abandoned mines that needs to be dealt with", said Steve Kandell of Trout Unlimited, one of the organizations backing the bill.

"When the event happened on Wednesday, the people on the ground misinterpreted, misread the severity of the impact", he said. However, EPA toxicologist Deborah McKean said the sludge moved so quickly after the spill that it would not have "caused significant health effects" to animals that consumed the water. They said samples also are being taken in New Mexico as the snout of the yellow-orange

plume moves toward the San Juan River, which flows into the Colorado River.

The company said that the EPA was operating under an access agreement and that when the agency was removing backfill from the portal to the mine, a “plug blew out releasing contaminated water behind the backfill into the Animas River“.

Farmington officials have shut all intake pumps to protect the city's water supply, so drinking water will not be affected by the breach. “It is unacceptable. We are all held up-because we don't know the water test results”.

The National Park Service has asked people to avoid drinking, swimming or recreating on the San Juan River within Glen Canyon National Recreation Area. The plume of orange sludge reached the northern New Mexico cities of Aztec and Farmington this weekend.

Both NMED and EPA are closely monitoring the situation in New Mexico.

But, the 60-year-old headgate for the Animas Consolidated Ditch is incapable of keeping all the water from the Animas River out, Zink said.

“This is a little bit of a slower time of the year, but we're still getting a lot of calls about boaters that are anxious about whether it's even safe to get on the river”, he said. Officials have cautioned people to stay away from the river as they investigate the health and environmental impact of the spill. They say the source of water is farther east near Chama, an area not hit by the spill.

During the excavation, the loose material gave way, opening the adit (mine tunnel) and spilling the water stored behind the collapsed material into Cement Creek, a tributary of the Animas River.

New Mexico Gov. Susana Martinez said the state's first notification of the spill came from Southern Ute Tribe officials.

State Environment Secretary Ryan Flynn said the EPA did not notify his department of the spill until nearly 24 hours after they'd caused it. He said the agency's initial response to the disaster was “cavalier and irresponsible”.

Durango Herald

<http://www.durangoherald.com/article/20150809/NEWS01/150809597&source=RSS>

Bennet, Gardner tell EPA to set an example for Animas River cleanup

Shane Benjamin

August 9, 11:27 PM

U.S. Sens. Cory Gardner, R-Colo., and Michael Bennet, D-Colo., said the Environmental Protection Agency must respond without reservation and set the right example for cleanup after unleashing an estimated 3 million gallons of toxic mine waste into the Animas River.

Andy Corra, center, co-owner of 4 Corners Riversports in Durango, talks with Colorado U.S. Sens. Michael Bennet, right, and Cory Gardner, left, on a bridge over the Animas River on Sunday morning in Durango. The politicians were getting a firsthand look of the damage done to the river after the Gold King Mine spilled about 3 million gallons of toxic waste into the water Wednesday. Enlarge photo
Jerry McBride/Durango Herald

Andy Corra, center, co-owner of 4 Corners Riversports in Durango, talks with Colorado U.S. Sens. Michael Bennet, right, and Cory Gardner, left, on a bridge over the Animas River on Sunday morning in Durango. The politicians were getting a firsthand look of the damage done to the river after the Gold King Mine spilled about 3 million gallons of toxic waste into the water Wednesday.

U.S. Sens. Cory Gardner, right, and Michael Bennet, next from right, stand on the pedestrian bridge that spans the Animas River behind the Powerhouse Science Center on Sunday in Durango. The river remains closed after toxic mine waste was unleashed Wednesday into the waterway above Silverton.

U.S. Sens. Cory Gardner, right, and Michael Bennet, next from right, stand on the pedestrian bridge that spans the Animas River behind the Powerhouse Science Center on Sunday in Durango. The river remains closed after toxic mine waste was unleashed Wednesday into the waterway above Silverton.
Related stories

3 million, not 1 million, gallons of contaminated water rushed from mine, EPA says
No major species dieoffs from Animas River contamination a cause for optimism
Durango kayaker reacts to Animas River photo that went viral
For economic assistance

Shaun McGrath, EPA administrator for Region 8 in Denver, said residents can file a claim for loss of employment or loss of revenue. To get the form, visit www.epaossc.org/GoldKingMine and click on Standard Form 95.

The two senators toured the riverbank Sunday in Durango, five days after a mustard-yellow plume of wastewater cascaded down the shores of Cement Creek and into the Animas River.

"We are going to hold the EPA accountable to make sure that they meet the highest standard of response, and if that standard sets an example for other actors, that will be a good thing," Bennet said. "But right now, our main concern is addressing this blowout."

The senators were joined by local government officials, representatives from the rafting and agricultural industries and scientists who have been testing pH levels in the Animas River. They walked on a swaying pedestrian bridge that spans the river behind the Powerhouse Science Center and north on the Animas River Trail to about Rotary Park.

The EPA was investigating seepage from the abandoned Gold King Mine above Silverton on Wednesday when a crew removed dirt from the collapsed entrance and accidentally unleashed a torrent of wastewater that had pooled behind the loose material.

As a result, the city of Durango shut off water pumps, the La Plata County sheriff closed the river to the public, ranchers stopped watering fields, and the tourism industry fears millions of dollars in lost revenue.

Long-term environmental impacts to fish, wildlife and insects remains a mystery, in large part because the EPA has yet to release a clear picture of the level of heavy metals that flushed downstream, including lead, zinc, arsenic and cadmium. The agency did release a data table from sampling done Wednesday and Thursday, but experts were still interpreting the numbers.

"We acknowledge frustration with the turnaround time for this information," the EPA said in a news release. "Workers at the lab and data experts are working continuously to develop the information."

Colorado Parks and Wildlife placed three cages containing 108 fish in the river, and only one had died as of Sunday, from unrelated causes, said Patt Dorsey, southwest regional manager for Colorado Parks and

Wildlife. "So we have had no fish mortality," she said.

City officials said the mishap highlights the need for a new water-treatment plant that would draw from Lake Nighthorse and create redundancy in the city's water supply. City Manager Ron LeBlanc said federal funding and easing bureaucratic hurdles with the Bureau of Reclamation, which oversees the Animas-La Plata Project, would help.

Marcie Bidwell, executive director of Mountain Studies Institute, said Wednesday's discharge involved one of thousands of leaky mines in the San Juan Mountains. Those mines and how we deal with them needs to be studied as part of the long-term picture, she said.

Bennet said he came to town Sunday to make sure the EPA acts urgently and provides information in a timely fashion.

"The Animas River is the lifeblood of this community," Bennet said. "We know it's not just about the economy – although that's important – it's about the way of life for people in and around Durango. When you see something like this, and you see the pictures, it's horrifying.

"Part of what we need to do is project confidence about this beautiful part of our state, where people from all over the world want to come recreate," Bennet said. "We're going to make sure that continues to be the case going forward."

When asked if the EPA should be held financially liable for interruption to businesses such as rafting companies, Bennet said, "We need to discuss what their responsibility is going forward."

Andy Corra, owner of 4 Corners Riversports, said he was having the best rafting season in years, but it came to a screeching halt Thursday. The river industry had a \$19 million economic impact according to an analysis done 10 to 12 years ago, he said, and that dollar amount has only grown.

"We're not going to recover," he said. "We're at the end our season. We've got another month normally, and I think that month is done."

The timing couldn't have been worse for those in rafting and agriculture, said La Plata County Commissioner Julie Westendorff. The event appears to be tapering off, she said, but when the next rainstorm stirs up sediment in the river, farmers and rafting companies can't wait 48 hours to seven days to know if the river is safe.

Farmers and ranchers need to know if they can irrigate fields and water cows, said Ed Zink, an area rancher and business owner. "We may need help, I don't know," he said. "We don't know that until we have information."

The EPA must lead by example, Gardner said. That means addressing immediate needs and improving transparency. He asked his staff to come up with a side-by-side comparison of how the EPA would respond if it were overseeing a private company that caused this disaster.

It will have to be determined how much responsibility the EPA bears for compensating local governments, businesses and agriculturalists, he said.

"Businesses are going to be hurt," Gardner said. "You shut down businesses that are relying on the river, and that has a ripple effect across all economies, whether it's sales-tax dollars going into city coffers, hotels booking up, outfitters having people. ..."

Roger Zalneraitis, executive director of the La Plata County Economic Alliance, who joined the walk with officials Sunday morning, said businesses should document cancellations specific to the spill and track revenue trends over the next couple of months.

"If there is going to be a system set up, people are going to want to see some documentation," he said. "Keep track of your records is the important thing at this point."

Said Gardner: "The broader message for the community, state and all across the country is Durango remains open for business; Durango remains a place where you can recreate today."

EcoWatch

<http://ecowatch.com/2015/08/10/mine-waste-spill-new-mexico/>

Massive Mine Waste Spill Reaches New Mexico

Nadia Prupis

August 10, 9:25 AM

Just days after workers with the Environmental Protection Agency (EPA) accidentally spilled a million gallons of toxic mine waste into a Colorado waterway, the free-flowing sludge that turned portions of the state's Animas River orange reached New Mexico, where health and wildlife officials say they were not alerted to any impending contamination.

The Animas River in Colorado turned orange with toxins after a spill sent a million gallons of mine waste into a waterway last week. Photo credit: La Plata County Emergency Management

The Animas River in Colorado turned orange with toxins after a spill sent a million gallons of mine waste into a waterway last week. Photo credit: La Plata County Emergency Management

As the cities of Aztec and Bloomfield scrambled to cut off the river's access to water treatment plants, they criticized the EPA for what they said was a lackluster effort in providing warnings or answers about the spill. The contaminants seeping into the river—at a rate of 548 gallons per minute—include arsenic, copper, zinc, lead, aluminum and cadmium.

The Animas flows into the San Juan River in New Mexico, which in turn joins the Colorado River in Utah's Lake Powell.

Workers unleashed the waste while using heavy machinery to investigate toxic materials at Colorado's non-functioning Gold King Mine. But the accident, while "unexpected" by EPA's admission, is a reminder that defunct mines still heavy with contaminants exist throughout the West.

The Associated Press writes:

Until the late 1970s there were no regulations on mining in most of the region, meaning anyone could dig a hole where they liked and search for gold, silver, copper or zinc. Abandoned mines fill up with groundwater and snowmelt that becomes tainted with acids and heavy metals from mining veins which can trickle into the region's waterways. Experts estimate there are 55,000 such abandoned mines from Colorado to Idaho to California and federal and state authorities have struggled to clean them for decades. The federal government says 40 percent of the headwaters of Western waterways have been contaminated from mine runoff.

There are a number of factors which contribute to the abandonment of such sites. One is cost, as cleaning up toxic materials can be an expensive endeavor. But more complex is the legal liability involved. According to the Clean Water Act, anyone who “[d]ischarges a pollutant from a point source into a water of the U.S.” without a permit can be prosecuted for a federal crime, even if they were trying to clean up pollution. That has prevented green groups from engaging in those cleanup efforts—particularly as an ongoing push for a “Good Samaritan” exception to the law has gone ignored by the federal government, AP writes.

“There’s still a whole generation of abandoned mines that needs to be dealt with,” Steve Kandell of Trout Unlimited, one of the organizations backing the “Good Samaritan” bill, told the AP.

Yet that ongoing issue is exactly what the EPA crew had been attempting to address last week—and the reason it won’t accept help. The Denver Post reports:

Silverton and San Juan County officials have resisted efforts to launch a full-scale federal “Superfund” cleanup to address this problem due to fears of a stigma that could hurt the tourism they count on for business.

“These are historic abandoned mines that have had acid drainage for decades. That is the very reason why we were up there,” EPA regional chief McGrath said. “We were trying to reach that drainage coming off the Gold King Mine. They were trying to put in a treatment system.

“We have been in conversations with the town of Silverton ... and the state of Colorado about listing this area under Superfund. And if it is listed then, of course, removal (of waste) is part of Superfund that would allow us to take action up there. We have not been able to move this area to a listing under the Superfund.”

In the meantime, cities have closed access of the river to recreational and agricultural users, while health and wildlife officials conduct additional tests to determine the potential impacts of the spill. Long-term exposure to arsenic and lead can be fatal to humans.

Recent heavy rains have also raised the prospect that some of the waste which washed up onshore as it flowed down the Animas last week would rinse back out into the river, causing additional damage.

“It’s hard to know what is going to happen as more river flows join it,” EPA’s on-scene coordinator Craig Myers, in Durango, told the Post. “It is diluting. (The sludge of contaminants) is going to be settling out in places.”

La Plata county director of emergency management Butch Knowlton was more direct in his assessment. “The population that lives along this river is at the mercy of the EPA,” he said.

Environmental Protection

<https://eponline.com/articles/2015/08/10/city-declares-emergency-as-spill-estimate-triples.aspx>

City Declares Emergency as Spill Estimate Triples

August 10

The city of Durango, Colo., has declared a local state of emergency in response to the Aug. 5 spill of wastewater from the abandoned Gold King Mine in Silverton. An EPA crew caused the spill, and a local EPA official on Aug. 9 reported that a river gauge showed 3 million gallons spilled into the Animas River,

which is three times more than initially estimated.

Some of the wastewater has reached New Mexico.

Durango's city manager, Ron LeBlanc, signed the emergency declaration Aug. 9, reporting that the EPA-caused spill "may be far in excess" of the city's resources. The declaration says the Animas River is a municipal water source for about 23,000 city residents, and the city's utility department had to stop pumping water from the river on Aug. 5 to prevent contamination of the municipal water system.

Forbes

<http://www.forbes.com/sites/ericmack/2015/08/09/the-epa-caused-a-huge-toxic-spill-now-streaming-toward-lake-powell/>

The EPA Caused A Huge Toxic Spill Now Streaming Toward Lake Powell

Eric Mack

August 9, 2:13 PM

Farmington, N.M. — The waters of the Animas River flowed a bright carrot orange past the Riverside Nature Center in Farmington Saturday morning where an electronic sign in the parking lot flashed the unusual news: "RIVER CLOSED." An equally steady stream of curious citizens parked just beyond the sign to make the quick walk to the riverbank and snap a picture of the fouled river with their phones.

"It's just sad," said one woman standing on the bank while others shouted and strained to keep intrigued dogs and children away from the water.

A toxic plume of one million gallons of untreated wastewater accidentally released by U.S. Environmental Protection Agency (EPA) workers from a closed mine upriver in Silverton, Colorado last Wednesday is to blame for the Animas' dramatically different hue from its normal color. Ordinarily, this river runs with deep blue and green waters, the type of which could be still be observed in the adjacent waters of the San Juan River upstream of the point just outside town where the Animas empties into it.

Beyond Farmington, the San Juan flows into Utah where it joins the Colorado River at Lake Powell, itself not far upstream from the Grand Canyon in Arizona.

By Saturday afternoon, the Animas was still emptying unknown amounts of heavy metals, perhaps including lead, arsenic, cadmium, aluminum and others into the San Juan, while a crowd of hundreds gathered in the Farmington Civic Center directed another kind of emotional reaction at Mark Hayes, who had the unenviable distinction of being the only person on stage at an emergency public meeting employed by the EPA.

"This is bull shit!" shouted more than one angry member of the audience on multiple occasions during the forum, but the comment was almost always directed at Hayes, who responded compassionately and empathetically, but with frustratingly little in terms of specifics, even referring the crowd to the agency web site for more information at one point.

Hayes was joined on stage by New Mexico Environment Secretary Kevin Flynn, State Engineer Tom Blaine, U.S. Congressmen Ben Ray Lujan (D), and local officials who all repeated warnings to stay away from the river and to refrain from using the water for irrigating, watering livestock or using wells within the floodplain until further notice. All the officials also took turns expressing their frustration with EPA's slow reaction to the accident, although in a more polite tone.

"This needs to be moved up to number one priority (for the EPA)," said Rep. Lujan. "This is an emergency."

Lujan said he was disappointed that EPA representatives had notified other affected agencies of the accident via email rather than personal calls or meetings and that many agencies were getting information on the incident from reports in the press before hearing it first-hand from the federal government.

Those disappointments were echoed by Flynn, who tried to calm the raucous crowd while at the same time laying into the EPA himself.

"Look, I've sued EPA twice," he told the audience, which responded with cheers. "But let's please try to be respectful as well."

Throughout it all, a beleaguered Hayes mainly repeated his refrain that the agency had begun sampling and testing the river to determine exactly what elements lurked in its contaminated waters, but that results were still forthcoming, but he assured the crowd that EPA would work to mitigate long-term impacts on agriculture and the environment in the region.

"I want you all to know that the Environment Department isn't waiting for EPA... I've been wearing the same clothes for three days," said Flynn. "We've been here doing testing of our own, and there is a lag time because those samples have to be sent off to a lab."

UPDATE: On Sunday morning, EPA posted preliminary test results from samples taken in Silverton, not far from the spill site, which show elevated levels of metals including aluminum, calcium, copper, iron, lead, magnesium and zinc. Results from samples taken further downstream are still forthcoming.

The toxic plume is expected to cross the Utah border Monday morning and enter Lake Powell Wednesday evening.

Fox 2 Now

<http://fox2now.com/2015/08/10/mine-waste-spill-turns-animas-river-orange/>

Mine waste spill turns Animas River orange

CNN Wires

August 10, 7:54 AM

The city of Durango and La Plata County, Colorado, have declared a state of emergency after a federal cleanup crew accidentally released mine waste into the water.

An estimated 1 million gallons of waste water spilled out of an abandoned mine area in the southern part of the state last week, turning the Animas River orange and prompting the Environmental Protection Agency to tell locals to avoid it.

"This action has been taken due to the serious nature of the incident and to convey the grave concerns that local elected officials have to ensure that all appropriate levels of state and federal resources are brought to bear to assist our community not only in actively managing this tragic incident but also to recover from it," said La Plata County Manager Joe Kerby.

According to the EPA, the spill occurred when one of its teams was using heavy equipment to enter the

Gold King Mine, a suspended mine near Durango. Instead of entering the mine and beginning the process of pumping and treating the contaminated water inside as planned, the team accidentally caused it to flow into the nearby Animas River. Before the spill, water carrying “metals pollution” was flowing into a holding area outside the mine.

Colorado Parks and Wildlife officials have been watching for any effects on wildlife since the incident began on Wednesday. They are optimistic that the effects of the spill on terrestrial wildlife will be minimal, the EPA said. Fish are more sensitive to changes in water.

Officials said they believe the spill carried heavy metals, mainly iron, zinc and copper, from the mine into a creek that feeds into the Animas River. From there, the orange water plugged steadily along through the small stretch of winding river in southern Colorado and across the state border to New Mexico where the Animas meets the San Juan River.

New Mexico Gov. Susana Martinez was in Farmington over the weekend to tour the damage.

“The magnitude of it, you can’t even describe it,” she said, CNN affiliate KRQE reported. “It’s like when I flew over the fires, your mind sees something it’s not ready or adjusted to see.”

The affiliate spoke to Rosemary Hart, who lives on the Animas River. Her family reportedly depends on a well to get water, and the spill has made the water unusable.

“We came out here together, and we looked at the river and we cried,” Hart told KRQE.

The EPA and the New Mexico Environment Department said they will test private domestic wells near the Animas to identify metals of concern from the spill.

Tests on public drinking water systems are conducted separately by the state environment department, the agencies said.

The Guardian

<http://www.theguardian.com/us-news/2015/aug/10/colorado-spill-animas-river-durango-toxic-orange>

Durango copes with 'orange nastiness' of toxic sludge river pollution

Erinn Morgan

August 10, 8:23 AM

In the shadow of the jagged, 14,000-foot-plus San Juan mountain range sits the fertile valley where Jennifer James Wheeling grew up as part of a ranching family that has taken its lifeblood from the Animas River for decades. That water has been used to grow hay, sustain a grass-fed beef herd, and farm organically grown vegetables.

This week the water glowed orange, filled with heavy metals and toxins that spewed from a gold mine near Silverton, Colorado, last Wednesday after the Environmental Protection Agency (EPA) and its contractor accidentally broke open a dam wall while investigating there.

“We got the call early in the morning and we shut down all our head gates, so none of it got into our fields or our ponds,” says Wheeling, who returned along with her siblings to James Ranch 15 years ago to work with their parents to grow their ranching and farming business. “They closed the [irrigation] ditch down but it’s not a sealable thing so it still leaked in and our own ditch has that orange nastiness all along it.”

That “orange nastiness” is a cocktail of cadmium, arsenic, lead, copper, manganese and other metals. The EPA released data Sunday revealing that it had released more than 3m gallons of the toxic sludge more than three times its original estimate – into Cement Creek, a tributary to the Animas River.

At their peak, arsenic levels were 300 times the normal level and lead was 3,500 times the normal level. Officials say those levels have dropped notably since the plume moved through the area.

The massive orange plume of that release has since moved downstream through the Animas Valley, into downtown Durango, and on through to New Mexico, where it has choked off the main water supply for farmers along the way, as well as the main drinking water supply for towns such as Aztec and Farmington plus the 27,000 square-mile Navajo Nation.

Colorado river pollution

Discoloration of the Animas River can be seen as it flows adjacent to Durango high school in the heart of Durango, Colorado. Photograph: Jeremy Wade Shockley for the Guardian

The main water supply for Durango is pulled from the Pine River, but after the city pulls out just over 5m gallons per day from this source, it looks to the Animas River. Currently, while it has asked residents to conserve, Durango is pulling water from slowly decreasing holding reservoirs.

At this stage, this event involves two states (soon to expand to four), two tribal governments, three EPA districts and multiple counties and municipalities. And, as of yesterday, the city of Durango and La Plata County declared a state of emergency.

La Plata County manager Joe Kerby said: “This action has been taken due to the serious nature of the incident and to convey the grave concerns that local elected officials have to ensure that all appropriate levels of state and federal resources are brought to bear to assist our community not only in actively managing this tragic incident but also to recover from it.”

The scenic Animas River waterway, which was the backdrop for parts of the movie Butch Cassidy and the Sundance Kid, is also hugely popular for water-based recreation, including swimming, standup paddleboarding, tubing and whitewater kayaking and rafting. This is a major source of tourism and revenue for local businesses.

“It’s terrible from a business standpoint and an emotional standpoint,” says Alex Mickel, founder and president of Mild to Wild, a popular outfitter of rafting and off-road Jeep excursions, who says he has lost tens of thousands of dollars in business since the mine blowout occurred, with more cancellations coming in every day. “It’s just devastating to see this damage happen to the river that’s at the heart of your community.”

Durango is an off-the-beaten-path city of nearly 17,000 people, many of whom moved there specifically to seek out a simplified mountain town lifestyle – fresh air, clean rivers, unlocked doors, backcountry and wilderness access and abundant recreation opportunities from skiing and mountain biking to backpacking and kayaking. The population is peppered with professional athletes, retirees, telecommuters and second-home owners, who have also banked on this fast-growing Four Corners hub as a real estate investment.

Animas River Colorado

Discoloration of the Animas River is evident at Santa Rita Park. This section of the river is designated as a whitewater park and kayaker slalom course. Photograph: Jeremy Wade Shockley for the Guardian
“This unfortunate event could not only affect the local business economy, but also real estate property values down the road,” says Durango resident Darren Croke, a homeowner and rental property owner who is also a telecommuter and principal software engineer for an electric motorcycle maker in California’s Bay Area.

As the Animas River drama unfolds – and the heavy metal-laced plume continues to move downstream where it has now converged with the San Juan River, which eventually feeds into Glen Canyon National Recreation area and Lake Powell – the short-term effects are being monitored and the long-term effects are being speculated. As sediment settles into the Animas riverbed, experts have warned that Durango could see a rash of river closures for years to come as those heavy metals gets kicked up by monsoons, spring snowmelt runoff from the mountains and major weather events.

The Gold King mine continues to discharge 500 gallons per minute but the polluted water is being contained and treated in two recently dug ponds by the site of the spill, according to the EPA.

The EPA has been criticized over the past several days for the way it has handled numerous points, from not notifying the state of New Mexico about the mine release event until 24 hours after it happened, to its slow pace in releasing water test sample results (along with historical data for comparison) that would clearly indicate the extremity of the situation.

“EPA is sending out all this data but not including the background and not putting it into the context of human health,” says Dan Olson, executive director of the San Juan Citizens Alliance, a local nonprofit that advocates for clean air, pure water and healthy lands.

Despite this frustration, a number of Durango residents who place a high value on accountability, honesty and karma – Tibetan prayer flags fly at many of the colorful, historic downtown homes – have maintained a positive attitude about the potential outcomes.

“No one has talked to us directly about that [financial compensation], but we are hopeful that the EPA is going to step up and do the right thing for the community and the businesses that were impacted,” says Mickel. On Sunday night, the EPA issued a press release with information on the claims process for “compensating citizens who suffer personal injury or property damage caused by US government actions”.

Data released thus far leaves some room for optimism. Six Colorado Parks and Wildlife test cages of 108 hatchery fish have seen only one mortality in the past few days. In addition, Silverton’s nonprofit Mountain Studies Institute, a mountain research and education center, has seen little effect from the event with its macro invertebrate study.

Durango river spill

Sediment from the wastewater collects along the shallows of the Animas River at Santa Rita Park in Durango, Colorado. Photograph: Jeremy Wade Shockley for the Guardian

“We still have all the major species of invertebrates,” says Aaron Kimple, MS, program director. “That’s a good sign that the river is going to be able to sustain this event. If the pH dropped to critical level we would have had big die-offs.”

With other potential impacts of this leak still unknown, some point to a potentially bigger problem highlighted by this event: the Silverton area lays claim to as many as 30 more abandoned mines that could experience a similar event. “There will be a next time because we haven’t figured out how to deal with these problems,” said Olson.

Despite the prevalence of potentially toxic legacy mines in the region, some experts suggest that the town of Silverton and surrounding San Juan County have resisted Superfund status and are still actively seeking out additional mining opportunities. “EPA has talked on and off about making San Juan County a Superfund site since the 80s,” says Peter Butler, Animas Watershed co-coordinator of the Animas River Stakeholders Group.

"In the 90s we did prioritize all the different sites and identified about 30 that we thought would need remediation," Butler continues. "We also came up with water quality standards that were adopted by the state of Colorado. But Superfund status has been in limbo for years and the local community [in Silverton] is wary of this, but EPA has been pushing for it. Silverton is a community that would still like to have mining and they are concerned they won't have any investors for future mining if they receive Superfund status."

At the same time, several of these mines have been leaking into the Animas River for a decade at the rate of as much as 600 to 800 gallons a minute, according to Butler. Because it is an ongoing problem punctuated by a major, river-altering event, some are now calling for a faster answer.

"In terms of all the work done to date in mine waste remediation, it has been insufficient to protect our communities from the harm left behind from a legacy of mining," says Olson. "What we really need now is to rethink our approach. At the end of the day, our communities aren't protected, so obviously what we've done has been insufficient."

The Hill

<http://thehill.com/policy/energy-environment/250709-epa-triples-colo-river-spill-estimate>

EPA triples Colo river spill estimate

Timothy Cama

August 10, 10:19 AM

The Environmental Protection Agency (EPA) believes it spilled 3 million gallons of mine waste containing heavy metals into a Colorado river, it said.

The latest estimate of the spill came out Sunday, and it's triple the EPA's initial estimate regarding its release of mine waste from the Gold King Mine into the Animas River at Silverton, Colo., The Durango Herald reported.

The agency has been under harsh criticism from political and environmental leaders in the days following the spill, which turned the river bright orange and caused officials downstream to restrict water intake, recreation, fishing and other activities.

The waste, which EPA crews accidentally released when removing backfill from the abandoned mine, is believed to contain metals like cadmium, copper, zinc and manganese.

The spill has caused declarations of a state of emergency, and the EPA is considering declaring some areas Superfund sites.

"This is critical information for us," Shaun McGrath, the EPA's regional administrator, told residents Sunday about the new spill estimate, the Herald said. "Now we have a much more reliable estimate of the volume that will help us with our work on modeling how this behaved and will continue to behave over the coming weeks and months."

The new estimate was based mostly on river flow readings from the United States Geological Survey, according to the Herald.

Local and state officials are angry that the EPA has still not released analysis of the tests it has conducted on the river. It has only released basic information about the metals it has found, and promised

more information in coming days.

Junior College

<http://www.tjcnewspaper.com/no-health-risks-to-wildlife-after-colorado-mine-spill-21992/>

No health risks to wildlife after Colorado mine spill

Adam Carter

August 10

The affiliate spoke to Rosemary Hart, who lives on the Animas River.

Stevenson says he would expect a pH closer to 7, and for that reason, the river stays closed from Colorado all the way to where it merges with the San Juan River west of Farmington. "Because this is an integral part of our community". "But we're going to win the war".

EPA regional administrator Shaun McGrath said the agency was "busting our tails" to provide a thorough lab analysis of the contaminants, which include lead and arsenic.

Meanwhile, as the toxic plume makes its way onto tribal land, Navajo Nation president Russell Begaye announced his intention to immediately take the EPA to court for the spill.

What should happen to the EPA.

The spill began on Wednesday after an EPA inspection team was called to the abandoned mine near the town of Silverton in southwestern Colorado to examine previously existing wastewater seepage.

More testing results are expected to be released later on Sunday.

"One of the big questions is how long does it linger", he said. "We still don't know how bad it is". "So that situation has changed".

"This action has been taken due to the serious nature of the incident and to convey the grave concerns that local elected officials have to ensure that all appropriate levels of state and federal resources are brought to bear to assist our community not only in actively managing this tragic incident but also to recover from it", La Plata County Manager Joe Kerby said in a statement. There are also reports that the contaminated water is heading towards Utah. "I don't know", McGrath said.

"This is a long-term impact".

McKean says the sludge laced with heavy metals moved so quickly after the spill that it would not have harmed animals that consumed it. "As we have storm surges, as we have flooding events, that sediment can and likely will get kicked back up into the water, and we're going to have to do ongoing monitoring and then potential closures in the future as well".

The amount of time needed for cleanup efforts is unknown. They are optimistic that the effects of the spill on terrestrial wildlife will be minimal, the EPA said. "The EPA admits fault, and as such must be accountable and held to the same standard".

The EPA is tasked with protecting these waters, but is now under fire after waiting nearly 24 hours to notify state and local officials of the spill.

According to an EPA Region 9 Emergency Response web page, the spill was triggered when workers trying to clear debris accidentally damaged a makeshift berm that was containing polluted water.

Gov. John Hickenlooper plans to visit early this week. "Public safety and environment remain priority for Colorado!"

The toxic spill in the Animas River has flowed into New Mexico – and concerned have residents shut down supplies.

"This is still the height of our tourist season", said Roberts. "Now we have a much more reliable estimate of the volume that will help us with our work on modeling how this behaved and will continue to behave over the coming weeks and months". "Someone had told the rafting companies, so, by mid-afternoon, none of them were operating in the water".

LA Times

<http://www.latimes.com/nation/nationnow/la-na-nn-animas-river-toxic-spill-20150809-story.html>

Colorado river spill underscores threat of old hard-rock mines

David Kelly

August 10, 3:00 AM

Keena Kimmel's bookshop occupies a cozy curve along the Animas River, a place of wild sunflowers and lilacs where fisherman try their luck and kayakers glide under iron bridges.

But this weekend the river was empty and Kimmel's heart broken.

"Years ago I was passing through on the way to Oregon and ended up staying because it was so beautiful," she said, gazing over the vacant waters. "I can't believe what's happened. I guess I'm still kind of in shock."

Shock, sadness and anger have gripped this pretty college town in southwestern Colorado as residents struggle to understand the slow-moving environmental disaster that has transformed their crystal clear Animas River — or the River of Souls, translated from its Spanish name — into a ribbon of mustard yellow sludge.

The tragedy in Durango underscores the persistent menace of defunct hard-rock mines, lingering like cancers across the American landscape.

It's difficult emotionally and economically to see the river damaged like that.

- Alex Mickel, owner of Mild to Wild, a Durango, Colo., rafting company

And for those with livelihoods put on hold, or possibly destroyed, by the spill, seeing the disaster unfold is made even more difficult because the culprits were their own government.

On Wednesday, the Environmental Protection Agency was supervising the draining of contaminated water from the defunct Gold King Mine above the town of Silverton. The water suddenly surged, overwhelming the crew and spilling into a tributary leading to the Animas River. The EPA initially estimated the spill at 1 million gallons, but tripled it to 3 million gallons Sunday.

A slew of heavy metals — cadmium, aluminum, copper and perhaps even arsenic — turned the water a

sickly fluorescent yellow. Local officials immediately ordered the river shut down.

"I want to come clean here," EPA Regional Administrator Shaun McGrath said at a public meeting in Durango on Friday. "Our initial assessment of this was inappropriate in that we did not know what we were dealing with here. Some of our earlier comments may have sounded cavalier about the impact to public health and wildlife."

McGrath said at a public meeting Sunday that officials had tripled the estimate of the toxic spill based on data from a U.S. Geological Survey water gauge downstream. He said that the leading edge of the plume could no longer be seen from the air and that Cement Creek, which carried the sludge into the Animas, appeared to be running clear.

Durango and La Plata County proclaimed states of emergency Sunday. Gov. John Hickenlooper plans to come to the area Tuesday, officials said.

Meanwhile, the plume has flowed downstream to Aztec and Farmington, N.M., and is expected to reach the San Juan River, Lake Powell and eventually the Colorado River.

Business owner

Keena Kimmel owns a bookshop along the Animas River in Colorado. "I can't believe what's happened," she said. "I guess I'm still kind of in shock." (David Kelly / For The Times)

"Honestly, it's a complete catastrophe and we don't even understand the full significance of it yet," said Ian Lenney, 23, who studies environmental science at Fort Lewis College in Durango and works at a health food store. "I don't plan to swim in the river for years. I don't plan to eat fish from the river. These heavy metals stick around and get into the food chain. I think you'll see fish and wildlife die-offs."

So far there are no reports of die-offs. In fact, state wildlife officials put out 108 trout in cages throughout the river and reported just one death.

Lenney seemed stunned by the EPA's role in the accident.

"You'd think a federal agency would be a lot more cautious, that there would be double and triple redundancies to prevent something like this," he said. "Who do you run to when your own government is at fault? We are all going to pay. Maybe we set ourselves up for this by not acting to clean these sites sooner."

The danger posed by mines was laid out in a 1993 report from the Mineral Policy Center, a Washington think tank dedicated to identifying threats to natural resources. The study said there were about 557,650 of these sites in 32 states and 50 billion tons of untreated waste covering public and private land. The waste included arsenic, asbestos, cadmium, cyanide and mercury.

"Mine effluents have already polluted 12,000 miles of the nation's waterways and 180,000 acres of our lakes and reservoirs and are a growing threat to underground aquifers," the report said.

About 40% of all Western headwater streams are polluted by old hard-rock mines, the EPA has said. Colorado has 22,000 such mines, ranking third behind Arizona and Nevada. Cleaning them up is difficult because the owners are often dead or unknown. Even if they are alive, many fear making matters worse by trying to remedy the situation, as the EPA just did.

Early mining techniques were all about speed and efficiency, with little or no regard for the environmental consequences.

For example, the Sierra Fund's 2008 report titled "Mining's Toxic Legacy" said that millions of gallons of

mercury were used to extract gold from ore and that untold tons of waste rock were left to leak their toxic contents into rivers and streams.

And as Gold King shows, the legacy lives on.

Many here believe the EPA had good intentions in trying to clean out the mine but faulty methods. And those methods could cost the city and entire region for years to come. The heavy metals in the plume will settle to the river bottom and get stirred up again and again by rains and runoff.

"We will have to do long-term monitoring and probably more closures in the future," said the EPA's McGrath.

That could be bad news for those who make their living on the 126-mile-long river.

"It's difficult emotionally and economically to see the river damaged like that," said Alex Mickel, owner of Mild to Wild, Durango's biggest rafting company. "We were doing 230 people a day until Wednesday. We have already had to cancel hundreds of reservations."

Mickel expects the EPA to compensate him for his loss, which he estimates at \$150,000 so far.

"They tried to do the right thing but failed to follow their own procedures — they admitted that — so they need to help the community economically," he said.

The waters have eerily changed colors as the plume advances, going from canary yellow to mustard to brown. "To tell you the truth, what happened here is sickening," said resident Nathan Arnold, 30. So many people depend on the river: fishing guides, hotel workers, kayak operators, farmers.

"The river is the lifeblood of the Four Corners," Arnold said, referring to the area where Colorado, New Mexico, Arizona and Utah meet.

The big question is whether the river will come back.

"At one point in the 1950s, the Animas was declared dead, and then it became a gold medal trout stream 30 years later," Mickel said. "I don't think we will need to wait another 30 years."

Looking at the jaundiced river on Saturday, it was hard to imagine revival any time soon.

Not only were the people missing, so were the birds and other animals. Earlier that morning, a group of people prayed at the water's edge for divine help in healing the river. They too were awaiting answers.

NBC

<http://www.nbcnews.com/news/us-news/colorado-mine-spill-toxic-wastewater-leak-far-exceeds-first-estimates-n407091>

Colorado Mine Spill: Toxic Wastewater Leak Far Exceeds First Estimates

Erin Mcclam

August 10, 11:43 AM

A spill that sent toxic water seeping from an abandoned Colorado gold mine and turned a river orange is three times as large as first thought, the Environmental Protection Agency said.

The EPA said Sunday that 3 million gallons of wastewater had spilled from the mine, and the sludge was still flowing. The EPA said that health risks to humans and aquatic life were not yet clear.

On Wednesday, an EPA-supervised cleanup crew accidentally breached a debris dam that had formed

inside the Gold King Mine, shuttered since 1923, sending a yellow-orange sludge leaking into the Animas River.

Water collected downstream showed higher than normal levels of arsenic, lead and other metals. In Durango, Colorado, the mayor assured people the water was safe to drink because the city shut off its intake valve from the Animas.

Still, "The river for us is an integral part of our community," state Sen. Ellen Roberts, who represents Durango, told MSNBC on Monday. "It's where people get married. People do their own private ceremonies along there. It's our daily life."

The discolored water reached New Mexico and by late Sunday was headed for Utah. Authorities there were planning to shut two wells that serve the town of Montezuma Creek. A tank of residential water in Halchita, Utah, was filled with water shipped from Arizona.

Newsmax

<http://www.newsmax.com/US/colorado-mine-EPA-waste-spill/2015/08/10/id/669356/>

Colorado EPA Mine Waste Spill Turns Animas River Orange

Courtney Coren

August 10, 12:06 PM

A state of emergency has been declared in Southern Colorado after mine waste was accidentally released into the Animas River by a federal cleanup crew, turning the river orange.

The Environmental Protection Agency has been working on cleaning up waste at the Gold King Mine, near Durango, Colorado in La Plata County, when a plug was accidentally knocked out of place with heavy equipment the EPA was using last Wednesday, CNN is reporting.

As a result, officials believe that about 3 million gallons of waste spilled out into the Animas River, USA Today reports. It was originally believed that the spill included 1 million gallons of waste, which included heavy metals such as iron, zinc and copper. Local residents were told by the EPA to avoid the river.

Special: Get Donald Trump's Cap Free – Make America Great Again!

According to USA Today, 500 gallons of waste continue to be discharged per minute, an EPA official said.

The EPA is also reporting that arsenic levels in the Animas River in the Durango area reached 300 times the normal level and that lead was at 3,500 times the normal level. However, those levels have dropped as the waste has moved out of the area.

EPA official Deborah McKean said that "it's not just a matter of toxicity of the chemicals, it's a matter of exposure."

La Plata County Manager Joe Kerby explained that the decision to declare a state of emergency in the area was done "due to the serious nature of the incident and to convey the grave concerns that local elected officials have to ensure that all appropriate levels of state and federal resources are brought to bear to assist our community not only in actively managing this tragic incident but also to recover from it."

Special: New Probiotic Fat Burner Takes GNC by Storm

The orange water then headed for the Colorado, New Mexico border where the Animas River meets the San Juan River. USA Today is reporting that restrictions are also in place in New Mexico, along the river.

New Mexico Gov. Susana Martinez toured the damage and told a CNN affiliate that "the magnitude of it, you can't even describe it."

She also blasted the EPA for not notifying state officials sooner, saying she first heard about it from the Southern Ute Tribe. The EPA contacted New Mexico almost 24 hours after the spill occurred.

"It's completely irresponsible for the EPA not to have informed New Mexico immediately," she said.

Federal and state officials are testing private domestic wells as well as public drinking water systems.

Paul Huter of the Free Patriot Post called the accident "an example of government overreach into an area that it has no business doing business in," adding that "when the government steps in, this is what happens — matters are made much worse."

New York Times

http://www.nytimes.com/2015/08/11/us/durango-colorado-mine-spill-environmental-protection-agency.html?_r=0

Anger Rises as E.P.A. Increases Estimate of Toxic Water Spill at Colorado Mine

Julie Turkewitz

Aug 10

DURANGO, Colo. — Anger over a spill of toxic water from a mine that turned this community's river into a yellow-orange ribbon rose on Sunday when the Environmental Protection Agency announced that the spill was three times larger than previously stated — and that the agency was still unsure if the polluted water posed a health threat to humans or animals.

The agency, typically charged with responding to toxic disasters, has claimed responsibility for the spill, which unleashed a chemical brew that caused levels of arsenic, lead and other metals to spike in the Animas River, a tributary that plays a vital role in the culture and economy in this patch of southwestern Colorado.

Agency officials said on Sunday that the size of the spill was larger than originally estimated: more than three million gallons rather than one million.

La Plata County and the City of Durango have declared states of emergency, and the county estimates that about 1,000 residential water wells could be contaminated. The river is closed indefinitely, and the La Plata sheriff has hastily recast his campaign signs into posters warning river visitors to stay out of the water.

The yellow plume has traveled down to New Mexico, where it is being tracked, but it is starting to dissipate, officials said.

On Sunday night, residents packed a school auditorium in Durango for a meeting with the agency's regional director, Shaun McGrath. During a public comment session that lasted more than two hours, residents flouted a sign on the wall that instructed the auditorium's typical patrons — middle schoolers — to refrain from calling out, jumping up or insulting others during assemblies.

Shouts rang out. A few people cried. One resident questioned whether the agency had refashioned itself into the "Environmental Pollution Agency." Others demanded to know what would happen to wildlife, livestock, water wells, sediment and river-based jobs.

"When — when can we be open again?" said David Moler, 35, the owner of a river-rafting company who had approached a microphone. "All I hear is a handful of 'gonna-dos,' " he added. "What should I tell my employees?"

Mr. McGrath and his colleagues urged patience and assured residents that they would provide information about health risks once they had it. The agency, he said, is awaiting test results to determine whether the water poses a risk.

"We're going to continue to work until this is cleaned up," Mr. McGrath said, "and hold ourselves to the same standards that we would anyone that would have created this situation."

On Aug. 5, a team from the Environmental Protection Agency was investigating an abandoned mine about 50 miles north of here. Called the Gold King, it was last active in the 1920s, but it had been leaking toxic water at a rate of 50 to 250 gallons a minute for years. It is owned by a group called the San Juan Corporation.

A call to the company's lawyer was not returned.

The agency had planned to find the source of the leak in the hope of one day stanching it. Instead, as workers used machinery to hack at loose material, a surprise deluge of orange water ripped through, spilling into Cement Creek and flowing into the Animas. The burst did not injure workers.

The next day, as the neon water slid into Durango, masses of community members watched from the riverbanks. Some called it a painful procession: The Animas River is considered the cultural soul of this region, a sort of moving Main Street that hosts multiple floating parades a year and is typically bustling with rafters and kayakers.

Children study the river. Sweethearts marry on its banks. Its former name, given by Spaniards, is Río de las Ánimas, coincidentally, "River of Souls."

On Sunday, State Senator Ellen Roberts, a Republican who lives near the river, cried softly as she considered the pollution, adding that she had dropped her father's ashes in its depths.

"It is not just a scenic destination," Ms. Roberts said. "It is where people literally raise their children. It is where the farmers and ranchers feed their livestock, which in turn feeds the people. We're isolated from Denver through the mountains. And we are pretty resourceful people. But if you take away our water supply, we're left with virtually no way to move forward."

There are about 200 abandoned mines in the Animas watershed, the last of which closed in the early 1990s. Colorado has about 23,000 abandoned mines; the United States has an estimated 500,000. Since the 1870s, metal mining has both enriched and poisoned this region, turning the earth under portions of southwest Colorado into a maze of tunnels and leaving behind shuttered sites oozing with chemicals.

The Animas region is distinct in that it has an organization called the Animas River Stakeholders Group, a loose coalition of mining companies; environmental groups; property owners; and local, state and federal government entities that have worked together since 1994 to clean up some of these sites.

In recent years, the group had identified the Gold King as one of the two most polluted mine sites, and some have pushed to figure out the sources of its chemical bleed, believing that a cleanup was necessary. The Environmental Protection Agency was moving ahead with that project — without its partners — when the spill occurred.

NPR

<http://www.npr.org/sections/thetwo-way/2015/08/10/431223703/epa-says-it-released-3-million-gallons-of-contaminated-water-into-river>

EPA Says It Released 3 Million Gallons Of Contaminated Water Into River

Bill Chappell

August 10, 8:42 AM

In an event that has led to health warnings and turned a river orange, the Environmental Protection Agency says one of its safety teams accidentally released contaminated water from a mine into the Animas River in southwest Colorado.

The spill, which sent heavy metals, arsenic and other contaminants into a waterway that flows into the San Juan National Forest, occurred Wednesday. The EPA initially said 1 million gallons of wastewater had been released, but that figure has risen sharply.

From member station KUNC, Stephanie Paige Ogburn reports for our Newscast unit:

"The EPA now estimates 3 million gallons of wastewater spilled from the mine into the Animas River. They also confirmed lead concentrations had spiked over 3,500 times historic levels just above the town of Durango.

"Debra McKean, a toxicologist with the agency, says levels peak and then decrease as the contamination flows downriver.

" 'Yes, those numbers are high and they are scary because they seem so high,' she said, 'especially compared to the baseline numbers.'

"New test results show significant increases in arsenic levels, and some mercury has been detected. Durango and La Plata County have declared a state of emergency."

Officials are warning residents, farmers and outdoor enthusiasts to avoid the water. The spill occurred at Cement Creek, releasing contaminants that will eventually make their way downstream toward New Mexico and Utah, in a river system that links to the Colorado River and Arizona.

Update at 2:30 p.m. ET: Contaminants Reach New Mexico

The National Park Service says that the plume of wastewater has now reached the San Juan River in New Mexico, NPR's Howard Berkes reports.

Howard adds that the Glen Canyon National Recreation Area has issued a statement saying, "Most river sediments will settle out of the water when the river current slows at Lake Powell."

GCNRA spokeswoman Cynthia Sequanna tells Howard that in the slackwater of the lake, "We expect most sediments will drop out in the 40-mile section of the San Juan River that is part of Lake Powell."

The Colorado River also runs through Lake Powell in that same section.

Our original post continues:

After waiting a day to reveal the incident, the EPA has been criticized by those who say it didn't announce the accident soon enough. EPA officials say it took time to realize the magnitude of the spill.

The EPA team had been working on the Gold King Mine near Silverton, an area that has many disused mines.

KUNC reports, "Scientists say it's the largest untreated mine drainage in the state, and problematic concentrations of zinc, copper, cadmium, iron, lead, manganese and aluminum are choking off the Upper Animas River's ecosystem."

The station also explains how the mines became sources of contaminated water:

"For most of the West's history, miners were basically allowed to run willy-nilly across the landscape, burrowing for gold, silver or other valuable minerals. According to Ronald Cohen, an environmental engineer at the Colorado School of Mines, whenever you dig into a mountain, 'at some point you are going to hit water.'

"That water, when it runs through the rocks in a mine, hits a mineral called pyrite, or iron sulfide. It reacts with air and pyrite to form sulfuric acid and dissolved iron. That acid then continues through the mine, dissolving other heavy metals, like copper and lead. Eventually, you end up with water that's got high levels of a lot of undesirable materials in it."

Reporting on how the breach occurred, Colorado Public Radio says that an EPA team used heavy equipment to dig into a dam at the Gold King Mine site, hoping to install a drain pipe. But because of the volume of water and the dam's makeup of soil and not rock, it spewed zinc, iron and contaminants into a runoff channel that leads to the nearby creek.

Quartz

<http://qz.com/475723/three-million-gallons-of-toxic-waste-water-is-flowing-into-a-river-in-colorado/>

Three million gallons of toxic waste water is flowing into a river in Colorado

Cassie Werber

August 10, 6:30 AM

For days, water contaminated with arsenic, mercury, and lead has been flowing fast from an abandoned gold mine in the US state of Colorado. Now, the government agency that caused the spill during a clean-up operation has said it is bigger than first thought.

The spill at the defunct Gold King Mine began on Wednesday, when a crew from the Environmental Protection Agency, which was clearing debris and trying to find the source of existing harmful leakages into the local water supply, breached a mine wall.

Waste water burst from the breach, flooding into Cement Creek and then flowing downstream into the Animas River.

Yellow mine waste water is seen at the entrance to the Gold King Mine in San Juan County, Colorado, in this picture released by the Environmental Protection Agency (EPA) taken August 5, 2015.

On Sunday, the EPA admitted that 3 million gallons of water had flowed from the mine since the incident, upping a previous estimate on 1 million gallons. The agency has apologized for the spill. Dave Ostrander, EPA regional director of emergency preparedness, told local residents (paywall): "We typically respond to emergencies; we don't cause them."

By the weekend, the contaminated water had turned the Animas river orange and crept 75 miles south to the border with New Mexico. But the EPA had also begun containing it in purpose-built pools to help manage the pollutants it contains.

Early reports also indicated that small creatures living in the river were still alive 20 hours after the incident. But local people have been advised not to use the water for cooking or drinking.

Reuters

<http://www.reuters.com/article/2015/08/10/us-usa-colorado-spill-idUSKCN0QF01C20150810>

Wastewater spill from Colorado gold mine triples in volume: EPA

Steve Gorman

Aug 9. 8:52 pm

Some 3 million gallons of toxic wastewater, triple previous estimates, have poured from a defunct Colorado gold mine into local streams since a team of Environmental Protection Agency workers accidentally triggered the spill last week, EPA officials said on Sunday.

The discharge, containing high concentrations of heavy metals such as arsenic, mercury and lead, was continuing to flow at the rate of 500 gallons per minute on Sunday, four days after the spill began at the Gold King Mine, the EPA said.

An unspecified number of residents living downstream of the spill who draw their drinking supplies from their private wells have reported water discoloration, but there has been no immediate evidence of harm to human health, livestock or wildlife, EPA officials told reporters in a telephone conference call.

Still, residents were advised to avoid drinking or bathing in water drawn from wells in the vicinity, and the government was arranging to supply water to homes and businesses in need.

The spill began on Wednesday after an EPA inspection team was called to the abandoned mine near the town of Silverton in southwestern Colorado to examine previously existing wastewater seepage.

As workers excavated loose debris at the site, they inadvertently breached the wall of a mine tunnel, unleashing a flow of the orange-tinged slurry that cascaded into Cement Creek and then into the Animas River downstream.

The town of Durango, Colorado, roughly 50 miles south of the spill site, shut off its intakes of river water as a precaution, according to the EPA.

By Friday, the main plume of the spill had traveled some 75 miles south to the New Mexico border, prompting utilities in the towns of Aztec and Farmington to shut off their intakes from the Animas as well, local authorities said.

Agency officials said they were consulting with representatives of the Navajo Nation, whose sprawling reservation borders Farmington and the San Juan River, which is fed by the Animas River and has also been tainted by the spill.

EPA previously estimated 1 million gallons of wastewater had been released since Wednesday, but on Sunday the agency revised that up to 3 million gallons, based on measurements taken at a U.S. Geological Survey stream gauge.

In recent days, EPA has been diverting the ongoing release into two newly built settling ponds where the waste was being treated with chemicals to lower its acidity and to filter out dissolved solids before being discharged to Cement Creek.

The creek's water quality has already been badly degraded from a long history of acid mine drainage in the area, agency officials said.

Preliminary water sampling from the creek and Animas River showed that concentrations of heavy metals briefly spiked in areas reached by the wastewater plume but appeared to clear considerably once it had passed downstream, EPA regional Administrator Shaun McGrath said.

EPA officials said that by Sunday, a delineated "leading edge" of the contamination flow was no longer visible from aerial surveys, indicating concentrations of wastewater were diminishing.

Slate

http://www.slate.com/blogs/the_slatest/2015/08/10/epa_mine_pollution_federal_agency_punctures_dam_at_cleanup_site_sends_pollution.html

EPA Punctures Dam During Cleanup at Century-Old Mine, Sends Toxic Waste Into Rivers

Beth Ethier

August 10, 7:55 AM

The Environmental Protection Agency has acknowledged that its cleanup operation at a Colorado mine has led to the release of around three million gallons of toxic waste into the San Juan and Animas Rivers, the Washington Post reports. The agency accidentally punctured a dam holding back water filled with arsenic and heavy metals left behind by the Gold King Mine, which has been closed since 1923.

Authorities in New Mexico, downstream from the spill, complained that the EPA failed to alert them in a timely manner about the release of the toxic plume, which began last Wednesday and has turned miles of the Animas River a mustard color. Local authorities are reportedly still waiting for details from the federal agency about the contents of the waste and the Navajo Nation, worried about the loss of irrigation for members' crops from polluted waters, is weighing a lawsuit against the EPA. From USA Today:

New Mexico Gov. Susana Martinez said the state's first notification of the spill came from Southern Ute Tribe officials. "It's completely irresponsible for the EPA not to have informed New Mexico immediately," she said after flying over the affected rivers.

State Environment Secretary Ryan Flynn said the EPA did not notify his department of the spill until almost 24 hours after they'd caused it. He said the agency's initial response to the disaster was "cavalier and irresponsible."

EPA regional administrator Shaun McGrath said the agency was "busting our tails" to provide a thorough lab analysis of the contaminants, which include lead and arsenic.

Reuters reports that the EPA has tripled its initial estimate of how much waste was released from the damaged dam before crews were able to divert the spill, which was still leaking at a rate of 500 gallons per minute on Sunday, into two newly-constructed ponds. After some of the contaminants have settled to the bottom of the ponds, the less-harmful waste will eventually be released into waterways.

KUSA, an NBC affiliate in Denver, noted that there are an estimated 55,000 abandoned mines across the western U.S., with Colorado University professor Mark Williams warning that "almost every abandoned mine has the potential" to release long-dormant waste. Officials in the affected states continue working to combat the five-day-old spill, which could have a long-term impact on the region:

Mike King with the [Colorado] Department of Natural Resources said Gov. John Hickenlooper verbally declared the waste spill a state disaster, and that he would make \$500,000 available for resources. There's no estimation for when the river may reopen. There's a concern that toxic sediment could sink

into the bottom of the riverbed—something that could potentially be brought back up when a storm comes months or even years down the line.

Tainted water from the spill has reached Farmington, New Mexico, where a town hall meeting Saturday saw an EPA official heckled over the agency's response, with state environment secretary Flynn promising attendees that "we will not allow the EPA to leave until they have compensated us."

USA Today

<http://www.usatoday.com/story/news/nation/2015/08/10/navajo-nation-epa-mine-wastewater-spill/31399517/>

Officials continue to deal with effect of toxic mine spill in Animas River

Joshua Kellogg
August 10, 11:31 AM

FARMINGTON, N.M. — As officials from the Environmental Protection Agency said the Gold King Mine discharged an estimated 3 million gallons of contaminated water into the Animas River, officials with the Navajo Nation, San Juan County and New Mexico are trying to keep residents informed.

EPA Region 8 administrator Shaun McGrath said Sunday the EPA is looking at the possibility of long-term damage related to toxic metals falling out of suspension as the plume slowly moved along the river.

"Sediment does settle," McGrath said. "It settles down to the bottom of the river bed."

McGrath said future runoff from storms will kick that toxic sediment back into the water, which means there will need to be long-term monitoring.

He added that "the Animas River has historically been polluted by acid mine drainage."

Mustard-colored water loaded with heavy metals, including arsenic, lead, copper, aluminum and cadmium, began rushing out of the Gold King Mine on Wednesday after an EPA team disturbed a dam of loose rock lodged in the mine.

The deluge of polluted water poured into Cement Creek and continued into the Animas River. The plume of pollution, clearly visible from the air and estimated to be more than 80 miles long at one point, reached Farmington on Saturday morning.

The plume of toxic waste passed through San Juan County on Saturday, heading west. It was expected to hit the Colorado-Utah border Monday morning, according to estimates from the San Juan County Geographical Information Systems department.

Officials advise residents with wells in the floodplains of the Animas River and the San Juan River downstream of the confluence of the two rivers to have their water tested before using it for cooking, drinking or bathing.

Carpenter said the biggest obstacle is providing drinking water for residents and livestock.

People and their pets should avoid contact with the river, livestock should not be allowed to drink the water and people should not catch fish in the river. Carpenter also instructed people to avoid contact with wildlife along the river in Berg Park.

County Executive Officer Kim Carpenter voiced frustration about the delay in getting information about the chemicals in the water. The data, he said, will "give us a big picture of what we are going to deal with and the long-term effects we will have to deal with."

On Sunday evening, Navajo Nation President Russell Begaye and Vice President Jonathan Nez attended a public meeting in Durango, Colo., after touring the Gold King Mine site.

Begaye told attendees his office will be aggressive in "putting (the EPA's) feet to the fire."

Nez said he felt like crying when he saw the mustard-yellow water stain in the river.

"Water in our region is very important," he said. "It doesn't matter if you are Navajo, if you are Hispanic, if you are Anglo. We are all part of this river basin. Now, we are looking upon the EPA with frustration."

Nez said the pollution will affect farming, drinking water and livestock on the Navajo Nation.

"A lot of livestock utilize the water," he said. "What are we supposed to do? Stand guard 24 hours to keep our livestock from drinking the water?"

Shiprock Chapter President Duane "Chilli" Yazzie expressed concern about tribal farmers and access to irrigation water.

"We're resigned to the fact that we will not get any irrigation water through our systems for the rest of the season," Yazzie said. "We're just accepting the fact that we have to face losing our crops. That is totally devastating to many, many families. It's very heartbreaking."

On Sunday morning, people walking the trails at Farmington's Berg Park echoed those sentiments, saying the contamination of the water was sad and disappointing.

Farmington resident Elton Daniels said he felt hopeless when he looked at the river after seeing photographs of it.

"I think it's going to have a damaging effect on the water we use," he said.

Officials have set up several potable water stations throughout the county for residents and RV and livestock owners to use.

Deborah McKean, chief of the Region 8 Toxicology and Human Health and Risk Assessment, said Sunday the EPA is in consultation with several other agencies, including the Centers for Disease Control and Prevention, to determine when the river will again be safe for recreation.

She could not say when that decision will come.

Daniel Silva, a 37-year-old resident and local fisherman who attended the forum, accused EPA officials of "terrorism" for their part in causing the spill.

McGrath said such an accusation was "really not appropriate."

"We are not in the business of creating these types of messes," McGrath said. "We are used to cleaning up these types of messes."

Vox

<http://www.vox.com/2015/8/10/9126853/epa-mine-spill-animas>

How the EPA managed to spill 3 million gallons of mining waste into a Colorado river

Brad Plumer

August 10, 12:30PM

Back in June, the Environmental Protection Agency had begun work to plug the abandoned Red and Bonita mine near Silverton, Colorado, that had been draining toxic heavy metals into the Animas River for years.

Then everything went horribly, horribly wrong.

On August 4, EPA workers were clearing out the nearby Gold King mine, closed since 1923, when they breached a debris dam that had been holding back a massive amount of water laced with arsenic, lead, and other toxins.

All that contaminated water gushed out, unstoppably, coursing down the mountains and turning the Animas River a sickening shade of yellow:

Over a million gallons of mine wastewater has made it's way into the Animas River.

At first, the EPA said that about 1 million gallons of wastewater had been released. Then, on an August 9 press call, officials said they'd taken fresh measurements and actually 3 million gallons had spilled out — about five Olympic-size swimming pools' worth.

Officials have warned people in the region to avoid contact with the river as the contaminated water surges through. The EPA is also warning people with wells in nearby floodplains to have their water tested before drinking or bathing. Both the nearby city of Durango and La Plata County in Colorado have declared states of emergencies, as has the Navajo Nation Commission on Emergency Management.

This whole disaster raises a couple of big questions: Why was the EPA messing around with abandoned mines in this area? And how did the agency manage to trigger such a massive spill? To understand this story, we have to walk back through the legacy of mining in Colorado, which is still creating grisly environmental problems to this day.

Colorado has hundreds of old mines still leaking toxins

Starting in the 1870s, miners have rushed to the Silverton region to seek out gold, silver, and other valuable resources. But as Stephanie Ogburn at KUNC and Jonathan Thompson at High Country News recount in excellent pieces, that mining boom left behind a serious mess.

There were two major environmental problems associated with mining. First, up until the 1930s or so, miners often just dumped their tailings — waste material that frequently contained toxic heavy metals — into nearby streams and rivers. Around Silverton, heavy metals accumulated in the riverbeds of the Upper Animas River, and their effects lingered for decades. For many years, fish couldn't survive in these waters.

Second, as miners dug and blasted shafts, they'd typically hit groundwater, which would begin flowing through fractures in the rock. As that water mixed with air and sulfides, it would react to form sulfuric acid. That acidic wash, in turn, dissolved and picked up various heavy metals in the ground — like zinc,

arsenic, lead, and copper. These toxic streams of water are known as "acid mine drainage," and they're still a problem to this day, flowing out of mines and into nearby streams.

The last mine near Silverton closed in 1991. But there are still more than 400 abandoned mines in the region, and many continue to fill up with toxin-laced water that then leaches out into rivers and streams. And cleaning up these old mines has been a gruesome challenge for decades.

The state has struggled to clean up these old mines — and EPA recently stepped in

Water flows into pits of mine wastewater below the Gold King Mine

Water flows into pits of mine wastewater below the Gold King Mine on August 7, 2015 along Animas River. (Photo By Brent Lewis/The Denver Post via Getty Images)

That brings us to the Red and Bonita and Gold King mines that the EPA was working on. These, too, have a tangled history.

In 1991, Sunnyside Gold Corp. closed its last big mine in the region, American Tunnel. After long negotiations with the state, Sunnyside began cleanup efforts and eventually plugged American Tunnel in three places to prevent further acid mine drainage.

Unfortunately, the water in the mines then backed up, and in 2006, acid drainage began leaking out of the nearby Red and Bonita mines, which had long been abandoned. The company that had taken ownership of these mines in the meantime, Gold King, soon ran into financial difficulties and could no longer treat the water that was pouring into the Upper Animas River. After a brief period when fish had returned to the river, it was poisoned yet again.

Now enter the EPA. Ever since the 1980s, the agency has wanted to declare parts of the Silverton region a Superfund site, which would trigger federal funds for intensive cleanup efforts. But local residents have long resisted this move, out of concern that the bad publicity would drive away tourists.

So instead, the EPA has been taking a more piecemeal approach — working with the state and the Animas River Stakeholder Group to clean up mines in the region bit by bit. That meant removing waste from both the Red and Bonita and nearby Gold King mines, diverting water that was entering those mines, and eventually plugging their openings with concrete bulkheads. The cost? Some \$1.5 million.

It's worth noting that even this cleanup measure was always considered highly uncertain. EPA workers didn't know if the acid mine discharge would eventually back out and flow somewhere else. "This, in a way, is as much as experiment as the American Tunnel," Steve Fearn, co-coordinator of the Animas River Stakeholders Group, told the Durango Herald in June.

The cleanup efforts went horribly awry in August

Residents sit on the edge of the river while awaiting a glimpse of the mine wastewater.

The EPA began cleanup work in late June 2015. On August 4, workers were clearing out the partially collapsed Gold King mine when they breached a debris dam that had been holding back toxic water, filled with contaminants. That water flowed out, and the Animas River was suddenly flooded yet again by a gusher of heavy metals.

Some notes here: First, the river was hardly pristine before this incident, and it's unclear how much additional damage this blowout has actually caused. Testing by the EPA has revealed that the heavy metal contaminants became more diluted by the time the water reached the town of Durango, and early tests downstream with fish cages have revealed that the water isn't killing them all. Still, it's a worrisome situation, and the agency is scrambling to monitor things closely.

Meanwhile, this is hardly the first disastrous blowout from an old mine. Jonathan Thompson of High Country News offers some context: "In June of 1975, a huge tailings pile on the banks of the Animas River northeast of Silverton was breached, dumping tens of thousands of gallons of water, along with 50,000 tons of heavy-metal-loaded tailings into the Animas. For 100 miles downstream, the river 'looked like aluminum paint,' according to a Durango Herald reporter at the time; fish placed in a cage in the water in Durango all died within 24 hours."

Still, what's eye-catching here is that this time the EPA is at fault — not a mining company. Even though the agency was trying to clean up a toxic mess that has been simmering for decades, even though efforts to stem the flow of polluted mining water have often gone awry, even though these particular cleanup efforts were basically expected to go awry, there's an undeniable irony in the whole situation.

"It's hard being on the other side of this, in terms of being the one who caused this incident," David Ostrander, the EPA's head of emergency management, told a crowd in Durango, according to the Guardian. "We usually respond to emergencies, we don't cause them," he said.

The agency is currently facing criticism for failing to notify other agencies quickly enough after the spill occurred — including the state of New Mexico, where the polluted water is heading. Indeed, if a company had acted in a similar fashion, the EPA might have potentially levied fines or other penalties.

In the meantime, the polluted water is coursing down the river, eventually joining up with other waterways and making its way into New Mexico, with the long-term effects still unknown.

The Wall Street Journal

<http://www.wsj.com/articles/colorado-spill-impact-widens-1439163937>

Colorado Spill Impact Widens

Officials estimate about three million gallons of wastewater spilled into the Animas River

Jacob Gershman

Aug 9, 7:45

Authorities scrambled to assess the impact of a toxic surge of wastewater from an abandoned gold mine in southwestern Colorado during a botched cleanup by the U.S. Environmental Protection Agency.

The agency apologized for the breach it caused, which sent mustard-colored sludge down the Animas River, and also for its delayed response, which drew harsh criticism from state authorities and residents.

Officials now estimate about three million gallons of wastewater spilled into the river from Gold King Mine north of Silverton, Colo., in the San Juan Mountains after an EPA cleanup crew accidentally breached a debris dam Wednesday morning.

The sludge spilled into a creek and then filled the Animas River, flowing past the city of Durango and into New Mexico, emptying into the San Juan River over the weekend.

On Sunday, Durango and surrounding La Plata County declared a state of local emergency because of the contamination of the Animas River.

"This action has been taken due to the serious nature of the incident and to convey the grave concerns that local elected officials have to ensure that all appropriate levels of state and federal resources are brought to bear to assist our community not only in actively managing this tragic incident but also to recover from it," said La Plata County Manager Joe Kerby.

The Animas River, a popular spot for rafting, kayaking and fly fishing, remained closed for recreational use Sunday, while the EPA treated drainage at the mine site and analyzed contaminant levels in water samples.

The agency said the water contains substances such as lead and arsenic that, depending on levels of concentration, could pose a threat to human safety and wildlife. By Sunday, the river appeared more translucent, as the leakage rate slowed to about 500 gallons a minute from 740 gallons a minute on Friday—but about double the rate of discharge before the accident.

EPA toxicologist Deborah McKean said Sunday that initial tests showed “scary” levels of toxicity in the water but added the potential danger hinges on how long it takes for them to return to normal. At the time of the accident, EPA officials were investigating the source of pollutants oozing from the mine for years.

In a meeting with frustrated residents in La Plata County on Friday, EPA officials apologized for causing the spill and for initially playing down its scope.

“This is a huge tragedy,” Dave Ostrander, EPA regional director of emergency preparedness, told residents. “We typically respond to emergencies; we don’t cause them.”

EPA officials said they were caught off guard by the amount of toxic wastewater that had accumulated inside the mine and were conducting a review of what went wrong in their hazard analysis prior to working on the site.

“We weren’t anticipating the impact we were going to have downstream,” said Shaun McGrath, the head EPA administrator for the region. “Unfortunately, some of our earlier comments sounded cavalier about the public health concern.”

Gold King is one of thousands of abandoned hard rock mines in the western U.S.—some dating back to the 19th-century Gold Rush—that left behind a legacy of waterway-threatening pollution that could take years and billions of dollars to clean up. The mine is owned by San Juan Corp., in Golden, Colo., and hasn’t operated since 1923, according to Ronald R. Hewitt Cohen, an associate professor at the Colorado School of Mines.

The company said that the EPA was operating under an access agreement and that when the agency was removing backfill from the portal to the mine, a “plug blew out releasing contaminated water behind the backfill into the Animas River.”

By Saturday, the sludge had reached the San Juan River, a tributary of the Colorado River near Farmington, N.M.

Ryan Flynn, secretary of New Mexico’s Environment Department, said the EPA alerted the state about the spill about 24 hours after Wednesday’s burst, delaying New Mexico’s response effort.

“They were really downplaying the issue,” Mr. Flynn said. “There will be time for accountability. We’re unhappy, but at this time were trying to control the situation.”

The seven water systems in the area have reserves good for 30 to 90 days, he said. The state has warned rural residents in the floodplain area who rely on unregulated private wells not to consume or cook with their water. Many of those residents are low-income Hispanics and members of the Navajo Nation, he said. Local farmers closed gates to ditches used for irrigation.

The Mountain Studies Institute research center in Silverton said small insects in the river near Durango were still alive 20 hours after exposure to the sediment and heavy metals, a sign that the short-term impact on aquatic life may not be as damaging as feared.

Colorado Parks and Wildlife officials said they were monitoring fish in test cages submerged in the river.

Aaron Kimple, a program director at the institute, said the sludge could leave behind lower levels of contaminants that could disrupt wildlife in years to come.

"One of the big questions is how long does it linger," he said.

Washington Post

<http://www.washingtonpost.com/news/morning-mix/wp/2015/08/10/epa-estimated-leak-of-mine-waste-into-colo-river-tripled-to-3-million-gallons/>

EPA: Estimated leak of mine waste into Colo. river tripled to 3 million gallons

Greg Kendall-Ball

August 10, 2:04 am

The Environmental Protection Agency now estimates 3 million gallons of mine waste has leaked into Colorado's Animas River from an accidental breach of a retaining dam last week, three times the amount previously disclosed.

The contaminated sludge, which was initially released from the Gold King Mine near Silverton, Colo., by agency workers last Wednesday and Thursday, has reached Farmington, N.M., more than 100 miles downriver. The EPA said Sunday that the mine continued to discharge the waste, which contained arsenic, lead and mercury among other heavy metals, at a rate of 500 gallons per minute, according to Reuters. The EPA has been diverting the ongoing spill into two new settling ponds where the waste is being treated to lower its acidity before being discharged into a tributary, Reuters also reported.

Analysis of the spill is ongoing and while it remains unclear what health risks humans or animals face from the contaminated water, EPA toxicologist Deborah McKean said the sludge moved so quickly after the spill that it would not have "caused significant health effects" to animals that consumed the water, according to the Associated Press.

The contaminated water plume is traveling through the lands of the Navajo Nation Reservation, which stretches over 27,000 square miles in the Four Corners region of Colorado, New Mexico, Utah and Arizona. Navajo President Russell Begaye said the spill is impacting the livelihoods of his people, and has instructed the nation's attorney general to begin preparations to file suit against the EPA. The Navajo Nation Commission on Emergency Management has also declared a state of emergency in response to the spill, the Farmington, N.M., Daily Times reported.

The EPA has not said how long cleanup efforts will take, the Associated Press reported. The EPA is looking into getting the area designated as a SuperFund cleanup site, according to the Daily Times.

Washington Post

<http://www.washingtonpost.com/news/morning-mix/wp/2015/08/10/what-the-epa-was-doing-when-it-sent-yellow-sludge-spilling-into-a-colorado-creek/>

What the EPA was doing when it sent yellow sludge spilling into a Colorado creek

Sarah Kaplan

August 10, 7:21 AM

The whole point of the project was to make Colorado's water safer.

Instead, while working to clean a mine in the San Juan mountains last Wednesday, workers with the Environmental Protection Agency unintentionally made the problem worse. A plug at the Gold King Mine site failed, the mine's owners told the Denver Post, releasing 3 million gallons of toxic yellow sludge into Colorado's waterways. By Sunday night, the plume had reached Farmington, N.M., more than 100 miles to the south.

The sight of the wastewater, long pent up in a mine that hasn't been operational since 1923, shocked the state and put the EPA in the hot seat. Why was the agency using heavy machinery at a site known to be full of toxins?

The answer, like the wastewater itself, is a part of Colorado's history.

The Environmental Protection Agency says the spill of toxic wastewater from a mine in Colorado is three times larger than previously thought. Residents are being advised not to drink or bathe in well water. (Reuters)

Burrowed into the state's craggy mountains are thousands of mines like Gold King, built during the mining bonanza that marked Colorado's beginnings. Though most of them have been closed for decades, they continue to make their presence known through the acids that slowly leach — and occasionally violently burst — into the water around them.

"The great news is that modern mining does not allow the release of these waters," Elizabeth Holley, assistant professor of mining engineering at the Colorado School of Mines, told the Denver Post. "The bad news is we owe our statehood to mining prior to any environmental regulations."

The documented gold discovery in Colorado is attributed to a Georgia prospector named Lewis Ralston, who was part of a wagon train bound for the already famous mines of California. According to lore, members of the train were resting for a day and Ralston, on a whim, decided to dip his gold pan into an unnamed mountain stream. It emerged with \$5 worth of gold, a sizable sum for the time.

A fellow traveler noted in a brusque June 22, 1850, diary entry, "Lay bye. Gold found."

Members of the wagon train lingered only a few days to examine the find, but Ralston would return eight years later with a team of prospectors. Those men soon found rich gold deposits in the mountains nearby, setting off the gold rush that would turn Colorado from an unexplored frontier of Kansas territory into its own booming state. Colorado was admitted to the Union in 1876.

The towering San Juan mountains around Silverton, Colo., were opened to prospectors in 1874. By the 1880s, more than half a dozen mines were operating in the area, including Gold King, most of them run by the Sunnyside Gold Corp.

Rich with veins of silver, gold and other precious metals, the mines drew thousands of people to the area. The nearby towns — Silverton, Telluride, the aptly named Eureka — were built on the estimated \$150 million in minerals that were extracted from the mountains. But the wealth came at a cost.

When underground water runs through a mine, it picks up traces of the minerals that are buried there, explains Colorado Public Radio station KUNC. When it mixes with mineral pyrite, it reacts with air to form sulfuric acid and dissolved iron. It also picks up other heavy metals, like copper and lead, as well as any of the chemicals that miners have been using to extract the resources. By the time it trickles out of the mountain and into nearby waterways, it's an acidic, often-toxic brew.

In mineral-rich mountains like the site of the Gold King mine, this process can happen even before prospectors start digging in. Cement Creek, the waterway that was first flooded with sludge last week, had been declared undrinkable in 1876, before mining in the area became widespread, according to the Denver Post. But drilling into the mountain sped things up quite a bit.

Ginny Brannon, director of the Colorado Division of Reclamation Mining and Safety, told the Denver Post that until 1977, Colorado had few laws requiring mining companies to deal with the wastewater they created.

"Folks could go out and do what they want and walk away from the sites, and this is one of them," she said.

The Gold King mine hasn't been operational since 1923, but several other sites in the same network of mines remained open for decades after. For more than 100 years, the mines were the lifeblood of the surrounding community. They provided the bulk of the jobs and one-third of the county's annual tax revenue, according to the Durango Herald.

Even two major disasters in the 1970s — a breach in a "tailing pond" (the basins that store contaminated water for processing) that sent tons of wastewater into the local watershed and a 1978 lake collapse that flooded the mine with water and a million tons of mud — didn't dampen support for the operation.

The multimillion-dollar cleanup costs did. In 1991, Sunnyside shut down its last mine in the area. And much of San Juan County was shut down with it.

"We lost half our population," Beverly Rich, the county treasurer and chairwoman of the San Juan County Historical Society, told Westword magazine in 2005. "We went from about 200 children to 43 kids in our school. We lost one-third of our county tax revenue. We lost a lot of our volunteer firemen — and good-paying jobs. Mining pays well, and tourism jobs don't quite cut the mustard."

The effects of more than a century of mining didn't disappear along with them. They're easily visible in the histories of local community, which often glorify their mining past. Silverton's motto, after all, is "The mining town that never quit."

"Did mining kill people? Of course, it killed people. Driving cars kills people, too. Do you want to get rid of cars?" Historian Duane Smith, a Durango resident and Fort Lewis College professor who has written several books about Silverton, told the Durango Herald in 2013. "Silverton owes its existence to mining, that's the truth."

The lingering effects are also noticeable in the area's waterways, which were suffering even before this latest breach. According to the Herald, three of the four fish species in the Upper Animas water basin (which includes Cement Creek and drains into the Animas River) disappeared between 2005 and 2010. Five years after that, the river was completely devoid of fish.

Insects and bird species have also fared poorly. And tests of the water flowing into Bakers Bridge, about three dozen miles south of Silverton, found that it carried concentrations of zinc toxic to animals. U.S. Geological Survey Scientists told the paper that the area was the largest untreated drainage site in the state.

The Animas River Stakeholders Group that was set up to deal with the issue after the mines were closed, which includes Sunnyside Gold Corp., didn't have the estimated \$12 million to \$15 million it would take to treat the contaminated runoff. And for years, Silverton residents resisted EPA involvement out of fear that the "Superfund" label given to the nation's worst hazardous waste sites would jeopardize the tourism

industry — the only source of income that could replace the vanished mines. A few even hoped that the mines would reopen one day.

Meanwhile supporters of EPA intervention accused Sunnyside of stonewalling the cleanup attempt to avoid liability.

The two sides reached an agreement of sorts this year. The mines would not be designated a Superfund site, and the EPA would provide \$1.5 billion to plug the problematic Red and Bonita mine, where polluted water drained at a rate of 500 gallons per minute, according to the Durango Herald.

But water has a habit of finding its way downhill, and plugging one mine often means it simply leaks from others, so the agency had to excavate and stabilize the Gold King mine upstream.

That's what they were up to on Aug. 5, when the loose material holding the mine together finally gave way. The water that had accumulated in the mine's long-abandoned tunnels went tumbling into Cement Creek.

"It was known that there was a pool of water back in the mine, and EPA had a plan to remove that water and treat it, you know, slowly," Peter Butler, who serves as a co-coordinator of the stakeholders group, told KUNC. "But things didn't go quite the way they planned and there was a lot more water in there than they thought, and it just kind of burst out of the mine."

The EPA has taken a lot of flak for the way it handled the incident — residents weren't notified for 24 hours after the breach. But agency officials said that the toxic flood just highlights the need to deal with the rest of the state's 22,000 abandoned mines.

"It's very unfortunate," Bruce Stover, the Colorado Department of Mining official in charge of dealing with abandoned mine sites, told the Associated Press. "We've been fighting this war for years, and we've lost a battle. But we're going to win the war."